

SUPPLEMENT TO WEEKLY BULLETIN

OF THE

DEPARTMENT OF TRADE AND COMMERCE

SEP 7 1920

TRADING IN SPAIN

BY

W. McL. CLARKE

Canadian Trade Commissioner to Italy

Issued by Authority of the Right Hon. Sir George E. Foster, P.C., K.C.M.G.

Minister of Trade and Commerce

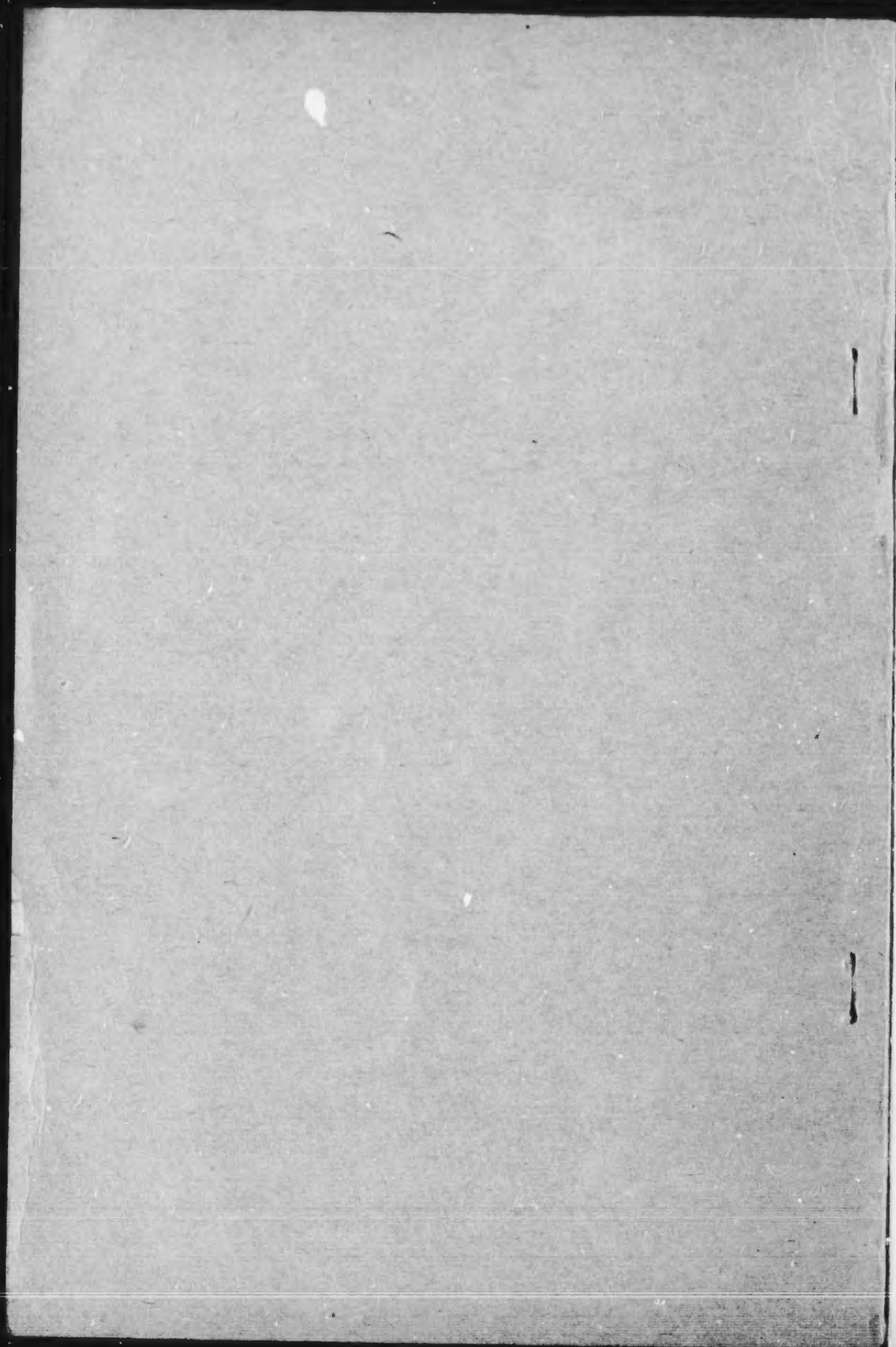
OTTAWA

THOMAS MULVEY

PRINTER TO THE KING'S MOST EXCELLENT MAJESTY

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TRADING IN SPAIN

PART I.

The Economic and Social Outlook in Spain.

At the commencement of hostilities Spain was a country with a depreciated currency, a heavy unfavourable trade balance, with her best securities the monopoly of the Paris market, business dividends low or wanting altogether, a land of agriculture and few strong industries, a country where native capital was not forthcoming, and where there was little general consciousness of the potentialities of the state commercial.

The present year finds a situation quite different. Her peseta is one of the highest monetary units of European exchange; an unfavourable trade balance for 1913 of 222,000,000 pesetas had become a favourable balance of 363,000,000 pesetas in 1918; the nation's gold security has increased from 543,000,000 to 2,290,000,000 pesetas; her bank deposits have risen by over 2,250,000,000 pesetas; banking, shipping and industrial dividends are on the incline; her railway bonds are finding their way to Madrid; native capital is no longer so disposed to lie idle—some 500,000,000 pesetas were invested in joint stock companies alone in 1917; her industrial development has been greatly accentuated, coal production, to mention but one item, having increased from 2,000,000 tons to 7,100,000; and not the least important is the awakening—forced as Spain was to recognize that other countries could not supply her needs as formerly and that these same countries had needs of their own—of the national consciousness to an appreciation of the country's resources in agriculture, mines, and water-power, and the many evidences there are that the Spain of the past, languid if not languishing, has determined to become a new Spain, building intangible castles no longer but rather devoted to more mundane and more practical pursuits.

Given this favourable change, what can be expected of its reflex influence on the nation? In the first place one looks forward to a greater intensification of all forms of national expression, the significance of which lies in the fact that Spain will doubtless proceed along those lines now already delineated and will tend to become more alive industrially and more keen in a commercial sense. Already there exists the distinguishable sentiment of Spain for the Spaniard, and the nationalistic feeling is far from inarticulate. It is to be predicted therefore that such feeling will take even more definite form, and that a policy of protection will accompany a more intensive activity. In the second place, Spain's increased purchasing power is giving her the means wherewith to follow up her developing prosperity, to finance more extended undertakings, and to buy more freely.

A third consideration is the correlated desire to become a trading people in a larger sense of that word. It may naturally be expected therefore that her international exchanges will tend to advance, and that Spain will better her railway, harbour and steamship facilities to that end.

Apart from what progress Spain will make by the use of its own national wealth, it is to be kept in mind that outside influences will no doubt continue to react on Spanish development. At present the foreign capital invested in Spain approximates 1,150,000,000 pesetas, and there are not a few indications that further capital from abroad is to interest itself in the country. If for instance the proposed international trunk line (Dax-Madrid-Algeciras) attracts sufficient capital to warrant its construction, Spain, once the railway is completed, will become *ipso facto* the bridge between Western Europe and Northern Africa, an accomplishment which can only be advantageous to the nation.

Finally, it will be asked, are there no disturbing social conditions whatsoever in the nation's life? To answer this question is but to state that a present-day modern

nation of 20,000,000 inhabitants, played upon by various ambitions and influences, is bound to have internal problems to solve. Then again there is the additional consideration that the medieval Spain is not yet entirely modernized, and that problems belonging properly to other days in most European countries here still persist. To enumerate only the more appreciable factors which impair the social order, one naturally thinks first of the labour difficulties which are especially prevalent in the eastern and northern sections and which find their most sinister expression in Barcelona, at once the Manchester and Liverpool of Spain. Crises and lockouts not infrequently occur, directed by a mysterious and Bolshevistic syndicalism which permeates the working classes and controls them voluntarily or against their will. Combated though this syndicalism is, its effects have been serious and far-reaching, but it is to be noted as an encouraging sign that an organization from among the workers and citizens themselves has only recently sprung into being for fighting against such mischievous domination.

Then there is the agitation of the Northeastern province, which in its most pronounced form aims at autonomy and independence for Catalonia, and in its mildest expression at the readjustment of the methods by which the province is governed and taxed. Ethnologically different from the rest of Spain, speaking another language even if understanding Castilian or pure Spanish and of a distinctive character which differentiates their thoughts and actions, the Catalonians generally give little thought to the rest of Spain and are actuated by the separatist principle of "Catalonia first." This problem in its political and social aspect is still unsolved even though a solution of some kind is known to be needful.

In the third place the "absenteeism" system of holding large tracts of lands by the prerogative of wealth and position is indeed a sorry defect in the social order, and is the more critical as it occasions serious discontent among the peasants with the life they are thus obliged to live, while at the same time it considerably hampers cultivation. Some urgent remedy of a radical nature is undoubtedly called for.

Finally, the cost of living continues to advance, and often the meagre wage is insufficient to guarantee a livelihood with any comfort to the labouring classes. It is the ever-present story of capital and labour, and in this case, apart from the demands of the syndicalistic movement previously referred to, it would seem that labour is more frequently entitled to a higher wage than it now receives.

If, however, the phenomena the writer has referred to in what has gone before is examined critically, and favourable and unfavourable features are set off one against the other, and if the national characteristics of a people who on the whole are honest, sober, fair-dealing, susceptible to friendship, cautious and yet not without ambition, and if to these characteristics of the people there be added the rich and undeveloped agricultural and mineral wealth of the country, it may be argued with telling evidence that Spain will continue to prosper, to make progress and to achieve still greater national and international status.

Before drawing any corollary from the foregoing statements, however, it is to be noted that Spain, flourishing as she is and with bright prospects for the future, industrially and commercially, possesses after all and can only be expected to possess a relative correspondence to outside countries. It would be a mistake for instance to presume that Spain is a big market in the absolute sense or will ever offer the opportunities for trade expansion as one day Russia, for example, undoubtedly will. Spanish needs there will be, but they must by the nature of things be circumscribed. Not only in fact are such needs destined to be limited, but competition from abroad is and will continue to be very keen. These facts deserve recognition.

With this proviso the writer is inclined to believe as a result of his preliminary investigations, that Spain with its varied requirements offers a much larger market for both natural and manufactured products than up to the present Canada has taken advantage of. Spain also may be regarded as having certain products whose greater importation would be of interest to Canada even if our market for her exportable goods must also be considered limited.

PART II.

Export Trade Accessories.

Carrying on trade with Spain as with other countries involves more than a general knowledge of the markets themselves to which goods may be sent and from where other goods may be drawn in exchange. Of course the comprehensive grasp of the market situation is most important, but it is often the methods of doing business and the underlying principles which govern successful trading that also need elucidation. Because of this it has been considered advisable at the outset to refer briefly to some of these other factors which may be called "export trade accessories" and upon which permanent success so largely depends.

It may happen at times that an export policy apart from a recognition of these factors is workable, but just as a competitor in a motor-car race will endeavour to equip his machine with every known improved accessory calculated to contribute to success, so the Canadian exporter if he desires to win out in the international trade arena of to-day, can well afford to make sure that he is not handicapped at the start by failing to appreciate those essentials—those export trade accessories—which make for success.

EFFECTIVE PROPAGANDA.

However much Spain may be known in Canada, it is clearly evident from traveling through the peninsula, that Spain herself possesses but a very slight knowledge of our country. Odd though it may seem, the writer was confronted on every hand with the most limited and inaccurate conception of the Dominion. This was not only confined to importers, but even big industrial men, bank managers and officials in Spanish Chambers of Commerce held most incomplete views as to Canada's place among commercial nations of to-day. Especially was this minimizing opinion held of our industrial development, and it may be stated that the majority of the individuals interviewed were quite frequently surprised at the few revelations made to them as to the productive and potential capacity of Canada. The deduction therefore is self-evident. If Canada is determined to do business in Spain, Canada must be made better known in that country by an effective propaganda.

GOVERNMENT AND PERSONAL PROPAGANDA.

Government action, important as it would be in getting Canada to the fore, can only accomplish its best results if representatives from among our manufacturers do the "follow-up work" and come themselves to Spain. It is highly important in this connection that only "authority" men be sent out, as not only a careful study of local conditions and the special needs of the Spanish market can best be made through these personal visits of the heads or directors of home concerns, but in no other way can the Spaniards come to appreciate what goods we have to offer and the kind of people with whom they are dealing.

METHODS OF ADVERTISING.

To supplement this personal propaganda there are of course other mediums which may be used to advantage. For example comprehensible catalogues and literature can be distributed to Spanish Chambers of Commerce, banks, and large and small importing houses; understandable circular letters can be despatched; and trade advertising might be done in some of the leading dailies and local technical reviews as well as in trade magazines which, though printed elsewhere, are circulated throughout Spain. Of course once a Spanish connection is formed various other methods of advertising

present themselves, as for instance street car advertisements, window featuring of Canadian wares, a practical demonstration of such goods as agricultural machinery, centrally located offices, theatre advertising, etc., each of which features are used by other countries in pushing their respective trades in Spain.

ELECTRICAL AND GENERAL EXHIBITIONS TO BE HELD IN SPAIN.

Another channel of effective propaganda is the showing of samples and participation in sample fairs. There is being planned a large exhibition of electrical products in Barcelona for probably the last of next year or during the first part of 1921; and Canadian electrical concerns, in view of the importance of electrical development in Spain, to which reference is made further on in this report, might advisedly take part. Moreover in Seville for 1921 and 1922 there is being worked out on an extensive scale a Spanish-American Exhibition, and it is expected that the majority of the South American Republics as well as the United States will be represented. This exhibition will be held in what is one of the finest if not the most beautiful park in Europe, and many special pavilions of most imposing architecture are being constructed for its accommodation. As Canada constitutes the greater part of North America proper, it would seem that a representative exhibit should be in evidence from the Dominion.

THE IMPORTANCE OF SENDING SAMPLES.

The writer was informed again and again of the Spaniard's predilection for seeing samples and the appreciable asset that foreign firm had which was prepared to show its goods and hold stocks of same in a Spanish warehouse or show-room till its merchandise was widely known. One importer in Barcelona told the writer that seeing an illustration of an article in a catalogue or trade magazine was like seeing a photograph of presumably a pretty woman. But on introduction the lady was not infrequently found to be anything but lovely. The secretary of the British Chamber of Commerce at Madrid moreover pointed out a specific case where a Canadian company had sent folders to the Chamber describing its glass churns with the request that the same be shown to possibly interested importing firms in the peninsula. Although several houses were approached, it was generally admitted that without a sample of the churn manufactured it was quite impossible to decide as to its merits and as to the expediency of trying out the Spanish market. Samples therefore wisely employed are often of material assistance.

AN APPRECIATION OF THE SPANISH VIEWPOINT.

If it is important that Spain should know Canada better, it is equally important that Canadians contemplating business with Spain should know and appreciate the methods by which the Spaniard prefers to conduct his business with foreign countries. In fact this appreciation of the Spanish viewpoint with its logical sequence of accommodating the Spanish importer, is most essential to success. Canadian exporters for instance might have better wares, ample means of carrying them to Spain, and a branch office in the country, but if they have all else and lack this willingness to please the buyer, they cannot in a competitive market win permanent success.

THE SPANISH LANGUAGE.

By accommodation the writer refers to those factors in foreign trade about which so much is nowadays written and spoken, but which in isolated cases only are crystallized into definite action in Canada, where an ultra-conservatism seems to persist in many quarters and modern export practice is not sufficiently adhered to. It may seem a hackneyed statement to repeat that the manufacturer or exporter who wishes to carry on business negotiations with Spaniards should do so in the language

of Spain. It is to be remembered that at first it will probably be the Canadian who will be obliged to approach the Spaniard, as the latter is receiving many offers from other countries, and it is at least a favourable *entré* to write or to address him in a language always intelligible.

METRIC WEIGHTS AND MEASURES.

But if the Spanish language is a needful qualification, so is the quotation of prices in Spanish currency and according to metric weights and measures. The mention of this point, in view of its admitted advantage, should be enough to emphasize it. A case can easily be imagined of a Russian company some day trying to initiate Canadian business in what to Canada would be a clumsy manner, i.e. by the employment of the Russian language, the Russian currency and the Russian weights and measures. True it is that English, the dollar and the *avoirdupois* tables are often more familiar to the Spaniard than the Russian trio of language, currency, weights and measures would be to Canadians; but a Spaniard always thinks first in his own language and according to his own standards, and other systems are to him at best a clumsy way of expression and a sign of an indifferent desire to please him and obtain his respect.

PRICE QUOTATIONS.

But having adopted the Spanish language and the metric weights and measures, still further accommodation in the quoting of prices reacts favourably on the Canadian exporter. The writer saw not a few letters while in Spain from Canadian firms offering various products *f.o.b.*, some inland Ontario or Quebec city. Now an inland quotation *per se* is highly acceptable to a Spaniard living for example in Madrid, but such inland quotations should refer to an inland point in Spain and not in Canada. Between these two methods of quotation there is a great difference. Of course if the importer lives in a seaport town, e.g. Barcelona, he desires a clear price through to his own warehouse in that city. This is the ideal system of quotation that should be aspired to by our exporting houses. As Germany was prepared to do this in most instances, and other countries were not so inclined, her penetration was made the easier. The Canadian might therefore advantageously be alive to the benefits resulting from such practice. To offer quotations delivered in the importer's stockrooms is not normally as difficult an operation as might first appear and demands but little more trouble on the part of the exporter. In calculating such laid-down quotations it is necessary, in addition to estimating cost, packing, insurance and freight, to take account of lighterage dues if such there are (and in Spanish trade it is always advisable to be informed on this point), all harbour taxes, customs duties, clearing expenses, octroi duties, and if the shipment is to be sent inland, railway freights to destination. This additional information can always be obtained from a reliable transport agent or customs house broker in the port of disembarkation. The writer is convinced that any such extra effort put forward is well worth the endeavour. If, however, products are not quoted *c.i.f.* delivered free to the customer's door, the least the Canadian firm can do is to quote *c.i.f.* Spanish port. The death-knell must be sounded to *f.o.b.* quotations, and imperatively so to *f.o.b.* quotations inland Canadian point.

TERMS OF PAYMENT.

Spain is a country where credit is expected in import trade. To lose sight of this fact is to lose business and safe business. Canadian manufacturers in carrying on domestic trade involving large sums of money recognize this principle of credit, although often in foreign trade they fail to appreciate its *raison d'être*. Export business to be remunerative permanently must be based on confidence in the buyer's ability to pay. This point should need no urging. Especially is its necessity apparent in a country like Spain where the psychological effect of such facilities, other things

being equal, will mean repeat orders to the home manufacturer. The Spaniard likes to be trusted, but the question arises, can he be relied upon to meet his financial obligations to foreign suppliers? The writer was careful to inquire into this point, and his findings would warrant him in concluding that credit can be safely granted in Spain on the condition that the Canadian manufacturer or exporter, after first of all doing what he does at home, i.e. posting himself as to the financial standing of the firm in question, finds that the Spanish importer is esteemed worthy of credit to such and such an extent.

The importance of making careful inquiry first, however, cannot be too highly emphasized. A case was brought to the attention of the writer of a Spanish firm which inquired for English agricultural machinery. The inquirers wrote under a most pretentious letter head surrounded by sheaves of wheat and various harvest crops and with indications of branch houses in various Spanish agricultural centres. The English firm without further investigation sold a small order of machinery on a credit basis, only to find out afterwards that the house had absconded and was in fact a specious organization. Investigation of a reliable nature would preclude any such disastrous results. With a Canadian and other British banks in Spain, with reliable rating houses in operation, with Spanish banks themselves prepared to assist in this commercial intelligence work, with a corps of British consuls throughout Spain and the presence of the British Chamber of Commerce, there can be no excuse for being ignorant of the commercial status of any Spanish firm with which it is worth while to do business. Of course as in Canada ordinary business risks must be taken, so in export trade with Spain these similar commercial risks are not absolutely precluded.

TERMS OF CREDIT.

When then are the terms of credit to be adopted if success is to attend Canadian effort? A great deal has been written about the extended credits of German firms. No doubt such facilities assisted in their export trade with Spain as with other countries, but the glowing accounts of their credit system are often unduly exaggerated. In agricultural machinery, where ability to pay often depends on the harvest the German was generally ready to accept whatever reasonable conditions were offered, and for a reaper payment in three yearly instalments was not an uncommon occurrence—one third on the purchase of the machine, and two instalments in accepted bills, the due dates of which would be at the end of the two succeeding harvest seasons. The writer was informed by one of the largest agricultural machinery importers in Spain that the German Transatlantic Bank operating in Madrid and Barcelona would hold accepted bills given by Spanish farmers in payment of their instalments for machinery to a German house for a very large amount and for a period of two or three years. In other products such as heavy machinery exceptional credit facilities were often conceded.

However lenient the Germans were in this respect, it is not necessary to conclude that such terms are indispensable to every contract nor that Germany was always disposed to grant them. The credit conditions which are at least expected by the Spanish purchaser in most trades are 2 per cent cash in thirty days, or net ninety days, in each case from receipt of documents and acceptance of drafts. Other quotations of a more severe nature irritate him and do not win his respect, even if during the war he has purchased on the best terms obtainable. The "cash against documents" payment and the "cash with orders" payment, for instance must in the interests of Canadian export trade be regulated to the limbo of the past.

In the actual sale of goods to Spain it has been found most generally satisfactory to conduct all credit business on accepted bills of exchange, as in this way the holders are in a much stronger legal position. It is, moreover, customary to remit a draft with bill of lading and invoice to a bank for presentation to the consignee for his acceptance. On the date of maturity the bill is presented by the bank for payment. Although such bills must legally be met before sunset of the day of presentation,

and although no grace days are technically allowed, yet it was more than once pointed out to the writer that the Spaniard would often ask to have the draft renewed and that no hard and fast rule should preclude the foregoing of such an accommodation. The Spaniard wants to pay his debts, but he will often request such a facility, and it is generally in the interests of the exporter, in anticipation of further business—provided he knows the importer's financial condition is sound—to meet the customer's wishes in this respect.

Naturally our manufacturers and exporters with a Canadian and British banks in Spain should not find it difficult to negotiate reasonable and yet accommodating payment for the goods they sell.

DELIVERY OF GOODS.

A word about delivery should be useful. The Spaniard wants to know, after he has made up his mind to purchase in Canada, when he can expect shipment and arrival of merchandise. This is most important to the Spanish firm, and even of greater importance to the Canadian if he wishes to build up any substantial trade and retain what trade he gets. Up till now the Canadian exporter has been subjected to many difficulties in guaranteeing any fixed delivery of goods not only to Spain but to Mediterranean countries. He has either shipped—except in rare cases—via New York or via English port of transshipment. This has been necessitated as Canada had no direct steamship service to Spain, and has undoubtedly prevented a great many orders being placed in Canada from Mediterranean centres. Whatever has been the policy in the past, it would now seem an opportune moment to effect a change and ship direct from Canada to Spanish and Mediterranean ports.

To-day freight rates and transportation are against us and will continue to be adverse unless Canada has her own Canadian service direct. In this period of keen commercial competition for overseas trade it is not to be expected that American ship-owners will show any partiality for carrying Canadian goods at the sacrifice of United States interests. The time has apparently come for Canada to look after, so far as possible, the carrying of her own exports and much is being done at present in Canada to realize this ideal.

DIRECT STEAMSHIP SERVICES RECOMMENDED.

As regards a Mediterranean service the writer is of the firm opinion that a steamship connection is one of the first if not the primary prerequisite to successful trading in these European countries.

It does not seem likely, however, that at present Spanish trade would warrant a separate service to Spain alone; but the writer believes that a more extended Mediterranean service touching Spain, France, and Italy is what would most beneficially serve our interests. It might also be further found expedient to touch at Lisbon on the outer voyage. Cadiz with its free port could properly be made a point of call for Canadian trade in Northern Africa, although Barcelona is the port most adapted to meet our Spanish requirements as an unloading centre. Further, Marseilles affords facilities to be considered in connection with Canadian trade with Southern France, while Genoa, Naples, Palermo, and Trieste have also claims upon any Canadian Mediterranean service. On the homeward route, Valencia and Malaga each would appear during the fall and winter seasons at least to hold out more advantages than Barcelona for ports of call, while Naples rather than Genoa might be made the tap service for Italian freight. At first a six weeks' or two months' service could be established, and even if increased trade was not at once what might be desired, there is no doubt in the writer's mind that, given enterprise and commercial intelligence, the suggested line would be a material asset in our trade expansion with these countries and at no distant date would compensate the efforts put forward for its beginning and operation.

A return cargo of natural and other products could apparently be found for at least six voyages a year. Citrous fruits, citric acid, raisins, almonds, nuts, rice, olives, olive oil, olive oil for soapmaking, cork, some specially tinned products such as peppers, etc., hides and skins from Northern Africa, perfumes, essential oils, salt, red oxide of iron, iron ore, sulphur, silk and hemp are among some of the characteristic articles these three countries export and what they at present could offer Canada in return for Canadian exports.

A passenger service should also prove remunerative, and among other advantages it might encourage more home manufacturers to visit Spain, France, and Italy for personal investigation purposes.

The idea to keep in mind, however, is that Canadian export trade with things as they are is crippled in these Mediterranean countries to no small extent owing to the lack of direct transportation facilities and that a regular service giving satisfactory delivery would mean not only new but repeat orders which are without question the basis on which any permanent trade can be built up.

REPRESENTATION.

The writer does not intend to disparage any one system of representation and to cry up another. The important point is that Canadian firms should be represented in Spain if they wish to do business, especially as Spain is often called the "land of the pedlar." Whether Canadians eventually open up direct agencies or use merchants and exporting houses at home, or whether they employ direct representatives or manufacturers' agents in Spain, or whether trade groups combine and send out a joint permanent representative, are questions which can only be settled as one system or another best suits the manufacturer's individual interests. One firm may find one system the most effective, and another manufacturer may prefer some other method. It may be noted, however, that if the manufacturer is determined to have his money in advance or cash at the seaboard it will generally be found necessary to do business through a middleman.

The ideal to be aimed at, however, is the centralizing of Canadian export business in Canadian hands; and no matter what policy is adopted periodical visits of competent travellers from the home firm should be made. This frequent contact of buyer and seller cannot be emphasized too highly. It is important to study each customer individually, and to find out local customs, conditions and prejudices. When necessary for demonstration purposes technical experts should be sent out, who can make specifications intelligible and who can make the dealer fully acquainted with the Canadian wares. In this connection it may be pointed out that the Spaniard is especially susceptible to friendship, and to treat him as they say in Spain with *simpatia* (sympathy) is to knock down barriers which otherwise might prove obstructive. In other words the social side of the importer should also be cultivated.

Business is not always done during ordinary business hours. The dinner party, the club or the café table for example are often the places where the biggest orders are put through and the most important information obtained, and no representative of a Canadian manufacturer should come to Spain without a salary and allowance which will enable him to live and entertain in a suitable style. It is further to be recommended that, if a competent representative goes to Spain and reports to head office certain changes in policy which if made would tell advantageously in favour of that firm's export trade, such suggestions should be acted upon. Otherwise the traveller, so far as the firm is concerned, might have stayed just as well at home. Actual alterations in the design or finish of goods, however, will depend upon the relative importance of the market and upon the degree of determination the manufacturer possesses in his desire to exploit that particular trade.

PACKING.

The Spaniard has a right to expect that the Canadian goods ordered will arrive in good condition, and it is therefore important to follow detailed counsel and to ship not only when but as instructed. As a general rule for heavy machinery, etc., it may be pointed out that cases should not be too thin; heavy weights demand pine or other soft wood with boards sufficiently wide and thick to ensure safe carriage. The writer was informed, moreover, that a greater resilience in cases was often advisable and that new boxes could always be used to advantage. The corners of packing boxes can be fastened with metal bands even if iron strips are not used for binding the case. Any small articles such as screws, nails or minor parts should be securely held in paper parcels and fastened to the machine itself. As almost all machinery pays duty on gross weights, and as interior packings are also reckoned in the weight for assessment, care should be exercised in reducing the volume of outside packing, where a saving can often be effected by dismantling the machine and fitting the smaller pieces into the larger to fill up empty spaces.

It may be further intimated that hardware for example, should be packed in neat boxes, attractively labelled in Spanish and so prepared as to give a good appearance on the shelves of the Spanish wholesalers' and retailers' shops.

Any case or crate used should have the port of discharge clearly stencilled in Spanish, which language should be used rather than English in any necessary lettering.

It may be added that the temperature of Southern Spanish ports, e.g., Cadiz and Seville, often reach 117° F. in the shade, and that this should be noted in preparing foodstuffs, etc., for shipment.

Faulty packing often tells against the exporter, and the Canadian in his desire to obtain the Spanish customer's approval should see to it that no just criticism can arise on this score. In fact the greatest attention should always be given to both inside and outside packing.

OTHER ESSENTIALS TO SUCCESSFUL TRADING WITH SPAIN.

Extreme care should be taken in making out invoices so that no difficulty will arise with the customs and thereby cause inconvenience to the importer. The Spanish language and the metric system should be used, and the merchandise specified in detail. Locks made of brass, e.g., pay a different duty than those made of iron, and hammer heads are dutiable according to their weight.

A further point brought to the writer's attention was the desirability of using what were called "translatable trade marks," i.e., marking the goods with some object which is intelligible to even the most unintelligent Spaniard. For example the French suppliers of certain edged tools to Spain have been accustomed to stamp on their products a lion's head. By so doing that brand has become widely known as the "lion" brand and is always asked for under that name. Fuller reference has been made to this matter of trade marks in the report on agricultural machinery, and it would be a considerable selling point if Canadian manufacturers in catering to the Spanish market would adopt some such system. The producer's name may of course be added if desired, but a marking such as has been described is what the writer would deem most likely to assist in bringing about permanent success.

Again, a Canadian manufacturer should be scrupulously conscientious in maintaining the quality of his goods and in shipping according to sample. Different importers who were interviewed found fault with other countries for failing to adhere rigidly to this principle.

It hardly seems necessary to point out the inadvisability of breaking contracts once made. Nothing can displease the Spanish customer more and make him impervious to further solicitations for business. All engagements should be pure-

tiliously kept, and a contract once duly entered into with a Spaniard should be filled at any cost by the Canadian manufacturer. Several cases were brought to the attention of the writer where firms of other countries were on the black books of the importer for any further orders.

In concluding these suggestions, it may be mentioned that the slightest improvement of a known model gives the manufacturer of the new model a real advantage over his competitor in Spain. As evidence of this the reader is referred to that part of the report dealing with machine tools.

CONCLUSION.

If then Spain comes to know more about Canada, and Canadian manufacturers begin to appreciate the Spanish viewpoint, trade exchanges will be effected much more easily and with greater benefit to both parties. In the last analysis of course trade generally goes where quality and price best correspond to the buyer's needs, but apart from the actual article and the price itself there are many other essential factors in building up our export trade with Spain, and it has been the writer's endeavour to present, on the basis of his findings, at least some of the more salient of these export trade accessories.

The writer's conclusion is that any considerable trade expansion between Canada and Spain will depend upon the strength of the initiative we Canadians take and the wisdom with which we conduct any Spanish campaign. Intelligence, enterprise, patience and expenditure are all needed for the conquests of new markets and it is fundamentally wrong to withdraw if profits do not appear immediately, provided we have what the Spaniard wants.

Finally, permanent success will attend only those Canadian houses which are prepared to give the Spaniard at least the terms of our strongest competitors.

PART III.

Facts about Spain.

AREA AND POPULATION.

Continental Spain covers an area of 190,050 square miles, and if there be added the Balearic and Canary islands which are considered as Spanish provinces, the total area is 194,783 square miles, or about one-nineteenth the size of Canada.

According to the latest compiled statistics the estimated population of Spain on December 31, 1917, was 20,842,902, i.e., 107 persons to the square mile.

TERRITORIAL DIVISIONS.

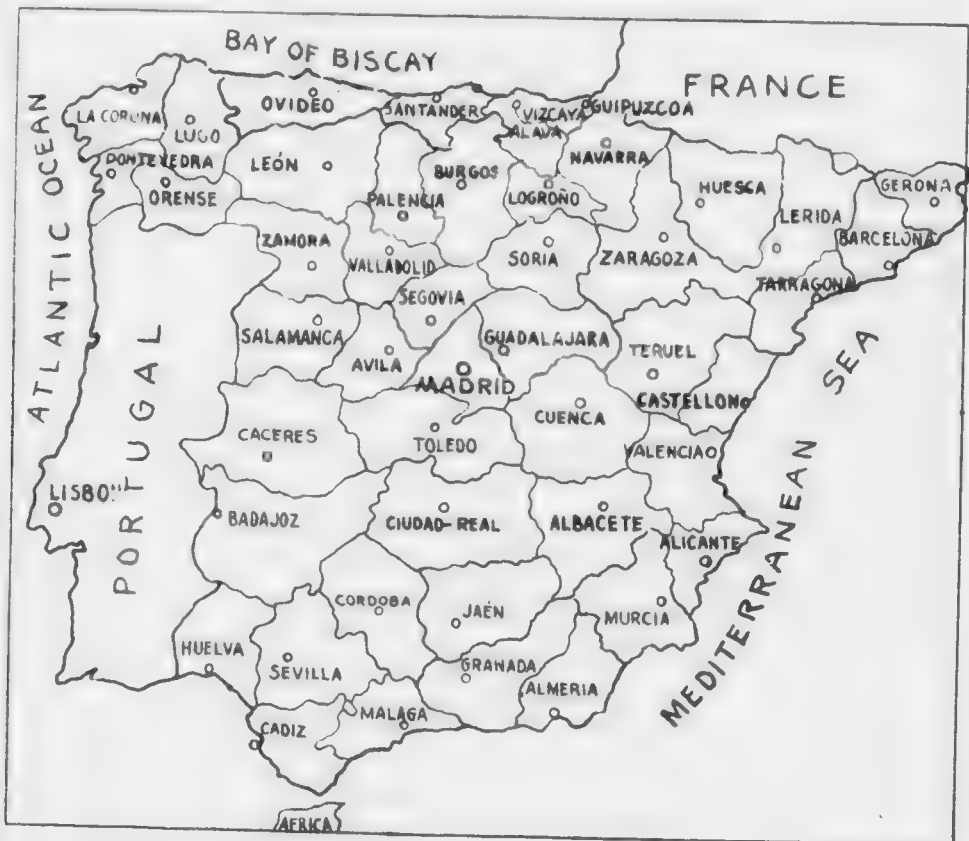
Spain is divided into the following principal territorial divisions, fifteen in number, which are enumerated herewith for reference purposes:—

Divisions—	Number of Provinces.	Area Square miles.	Population. (Census, 1910.)
New Castile..	5	27,935	1,923,310
Galicia..	4	11,254	1,985,422
Asturias..	1	4,205	685,131
Leon..	5	21,040	1,453,249
Old Castile..	6	19,194	1,314,369
Extremadura..	2	16,118	882,416
Andalusia..	8	33,777	3,829,060
Murcia..	2	10,190	815,864
Valencia..	3	8,830	1,587,533
Catalonia..	4	12,427	2,084,000
Aragon..	3	18,294	912,710
Navarra..	1	4,055	312,235
Vascongadas..	3	2,835	555,536
Balearic Islands..	1	1,935	326,023
Canary Islands..	1	2,807	444,016

PROVINCES

As there will be occasion to refer to the different provinces of Spain throughout this report, they are appended herewith, grouped according to territorial divisions:—

Divisions	Provinces
New Castle.....	Madrid, Toledo, Ciudad Real, Cuenca and Guadalajara
Gallcia.....	Oviedo
Asturias.....	Corunna, Lugo, Orense and Pontevedra.
Leon.....	Leon, Palencia, Salamanca, Valladolid, and Zamora.
Old Castle.....	Avila, Burgos, Logrono, Segovia, Soria and Santander.
Extremadura.....	Badajoz and Caceres.
Andalusia.....	Almeria, Cadiz, Cordoba, Granada, Huelva, Malaga, Jaen and Sevilla.
Murcia.....	Murcia and Albacete.
Valencia.....	Valencia, Alicante and Castellon.
Catalonia.....	Barcelona, Tarragona, Lerida and Gerona
Aragon.....	Zaragoza, Teruel and Huesca.
Navarra.....	Navarra
Vascongadas.....	Alava, Guipuzcoa and Vizcaya
Balearic Islands.....	The Balearic Islands
Canary Islands.....	The Canary Islands



LEADING SPANISH TOWNS AND CITIES.

Spain has two cities with more than 500,000 population, seven cities with more than 100,000 inhabitants, and fifteen other cities with a population over 50,000. The following table is so arranged as to show the population of the principal urban centres:—

Cities.	Population. (Dec. 31, 1917.)	Cities.	Population. (Dec. 31, 1917.)
Madrid..	648,760	Orihuela (Alicante) ..	35,236
Barcelona..	621,419	Huelva..	34,492
Valencia..	245,871	Vitoria..	34,304
Seville..	164,322	Alcoy (Alicante)..	33,883
Cartagena..	162,519	Castellon..	33,286
Malaga..	140,975	Salamanca..	32,971
Murcia..	133,012	Burgos..	32,675
Zaragoza..	124,455	Antequera (Malaga) ..	32,215
Bilbao..	100,461	Jaen..	30,947
Granada..	82,726	Pamplona..	30,779
Santa Cruz de Tenerife..	79,889	Elche (Alicante)..	30,713
Lorca..	72,795	La Linea (Cadiz)..	30,005
Santander..	72,373	Lerida..	27,515
Cordoba..	72,316	Logrono..	27,138
Valladolid..	71,834	Albacete..	27,089
Palma de Mallorca (Balearic Islands) ..	69,758	Pontevedra..	25,293
Cadiz..	66,106	Tarragona..	22,988
Jerez..	61,250	Toledo..	22,115
Corunna..	60,483	Leon..	19,621
Las Palmas (Canary Islands)..	60,334	Palencia..	19,488
Alicante..	58,088	Caceres..	18,549
San Sebastian..	56,779	Gerona..	17,772
Oviedo..	55,913	Zamora..	17,473
Gijon..	55,088	Orense..	17,191
Almeria..	48,614	Segovia..	15,357
Lugo..	41,632	Guadalajara..	12,932
Vigo..	41,500	Teruel..	12,574
Badajoz..	37,600	Cuenca..	12,392
Linares (Jaen)..	36,287	Huesca..	12,153
		Avila..	12,137

SPAIN'S ECONOMIC DIVISIONS.

From an economic viewpoint Spain may be divided into four principal zones:

(1) To the north a coastline belt, including Galicia, Asturias, Santander, and the Vascongadas provinces. This region is especially noted for its fisheries, timber resources, cattle raising, dairying, iron ore, coal and metallurgical industries.

(2) The central zone comprises the two Castiles, Leon and part of the Extremadura, and is economically important for its grain growing, animal wealth, quicksilver mines, and its varied manufactures, centred in Madrid.

(3) To the eastern division belong the more northerly provinces of Aragon, Navarra and Catalonia (the last celebrated as the manufacturing centre of Spain), and to the southeast the provinces of Valencia and Murcia, which produce rice, the mulberry tree, and a great variety of fruits and vegetables, which constitute the semi-tropical gardens of Spain.

(4) Andalusia makes up the southern zone, where flourish various fruits and where is found a wealth of copper, lead and iron ore.

CLIMATE.

Although Spain is bounded on three sides by the sea, its climate is one of the driest in Europe. Along the northern littoral there is a heavy rainfall throughout the spring and autumn months, while the district has long winters owing to its exposure to the Pyrenees. The edges of the central plateau, however, are so high, so abrupt and so near the sea that nearly all the moisture is condensed before the winds reach the interior of the country, which is subjected to extremes of heat and cold. The southern part of Spain, owing to its proximity to the Sahara and the narrowness of the Mediterranean, is exposed to intense heat during the summer, but the elevated

plateau makes the winter temperature much lower. In the valleys of the southern Sierras and the plains of the Mediterranean and Atlantic coasts, the spring and autumn seasons are stated to be delightful, while the winter may be considered mild and the summer as already intimated, tropical. In fact the Spanish climate is characterized by extremes and although skating is quite common around Madrid in the winter season, bananas, the sugarcane, and even the date palm ripen in the Guadalquivir basin.

OCCUPATIONS OF INHABITANTS.

The following classification based on the last official census of 1910 shows the occupation of the various inhabitants:—

Classes—	Percentages.
Inhabitants economically active.....	34.91
Professional classes.....	1.26
Civil servants.....	1.05
Persons financially independent.....	1.60
Domestic servants.....	1.63
Members of families and of no occupation.....	59.55
Total.....	100.00

It has been estimated that the economically active population, i.e., the 34.91 per cent, are employed as follows:—

Description—	Of the 34.91%	Of Total Population.
Agriculture and forestry.....	70.49	24.61
Hunting and fishing.....	0.64	0.23
Mining.....	1.19	0.42
Manufacturing.....	14.39	5.02
Transportation.....	2.10	0.73
Commerce.....	2.13	0.74
Labouring classes.....	9.06	3.16
Total.....	100.00	34.91

PRODUCTIVITY OF THE SOIL.

A recent calculation indicates that 88.45 per cent of the soil of Spain is productive and utilized according to the table appended:—

Description—	Acreage (approximate).	Percentage.
Agricultural lands and gardens.....	44,836,855	7.5
Vineyards.....	3,157,525	4.5
Olive culture.....	3,662,729	2.9
Pasture grounds and woods.....	31,954,153	25.3
Forests, natural meadows, waste and unimproved lands.....	28,038,822	22.2
	111,650,084	88.4

THE AGRARIAN PROBLEM.

Spain being an essentially agricultural country, with the resources at her command as yet imperfectly developed, is seeking how best to remove the disadvantages under which agriculture is carried on. Herein lies the agrarian problem to which Spanish statesmen are turning their attention, conscious as they are of the fact that upon its solution depends the giving of a higher standard of life to the common people and the greater participation of Spain in international trade exchanges.

This agrarian question depends upon, among other factors, for its solution:—

(1) A greater use of the productive land existing, as only 48 per cent of the country is cultivated, approximately 50,000,000 acres, although but 11.6 per cent of the soil is unproductive. It is especially claimed (a) that large tracts of steppe lands by intelligent effort could be at least advantageously turned into forestal area; and (b) that a large number of the privately-owned estates now only slightly cultivated, should be turned into productive lands.

2. A more intensive use of the ground already under cultivation, which implies reforestation, extend irrigation, the employment of more agricultural machinery and the more plentiful use of chemical fertilizers.

3. The extinction of seigniorial domains and absenteeism and the formulating of a rural policy which will encourage and protect ownership of lands by the farmers themselves.

4. The placing of more labourers on the land. The proportion of the population devoted to agriculture is but slightly more than half that in France or Germany, in spite of the fact that in the national economy of the three nations, Spain depends on agriculture, to a much greater extent.

5. The retention at home of a larger portion of the population who emigrate, especially to Argentina. In the last ten years before the war it was estimated that the exodus amounted to 125,000 annually.

6. An efficient system of agricultural credits by which the farmer will be enabled to secure his economic independence, thereby improving his standard of livelihood and enabling him to be able to provide himself with the education and the implements necessary to make his fields yield the greatest production of which they are capable.

7. The extension of good roads.

8. The establishing of closer relations between the farming communities and those who devote themselves to the technical study of agricultural production.

9. The greater use of experimental stations.

10. The enactment of a comprehensive system of agricultural legislation.

AGRARIAN PROBLEM OF INTEREST TO CANADIAN EXPORTERS.

The solving of this Spanish agrarian problem has more than an academic interest to the Canadian exporter. Its accomplished solution means a greater demand for products of all kinds, which demand will be coincident with the higher standard of life thereby achieved, while the working out of the solution entails *inter alia* a heavy importation of (a) agricultural implements and machinery (and even of the 48 per cent of the land cultivated, no small part is farmed by primitive and inefficient methods), (b) of chemical manures (their need was continually brought to the exporter's notice in his investigations), and (c) of pumps and irrigation installations. About 2,300,000 acres are at present under irrigation of some sort, but the equipment used is often antiquated. In addition, the present programme for irrigation will bring another 1,235,000 acres under a watered area, and it is hoped to reclaim eventually by irrigation some 10,000,000 acres of the national territory.

The working out of the Spanish agrarian problem should be deservedly watched by the Canadian exporter.

ESTIMATED VALUE OF FIELD CROPS, ETC.

Viscount Eza in his *Economical Problem of Spain* gives the following estimates for an average normal year: -

	Pesos (Ls.)
Pastures and general cattle food.....	200,000,000
Hay and other forage.....	296,000,000
Straw, etc.....	286,000,000
Corn (wheat).....	560,000,000
Other cereals, maize, barley, etc.....	691,000,000
Peas, beans, etc.....	157,000,000
Wine.....	378,000,000
Oil and olives.....	199,000,000
Fruits.....	261,000,000
Vegetables.....	375,000,000
Roots, potatoes, etc.....	264,000,000
Industrial plants.....	34,000,000
Cattle products.....	585,000,000
Poultry, etc.....	212,000,000
Total.....	4,715,000,000
Other products non-classified, or not included in the statistics..	1,212,000,000
Probable total, in round figures.....	6,000,000,000

It is evident, from the above figures, that Spain, as an agricultural country, is very highly developed. Viscount L. de L., more over, of the opinion that upon the basis of a more distribution of land, crops worth some 12,000 million pesetas could be produced in an ordinary year. Other authorities agree that, as means of methodical clearing of land, irrigation, chemical manure, organized afforestation, new railways and the necessary co-operation on the part of the big banking firms, the actual output could not only be doubled, but multiplied three or four times.

WHEAT.

Of the cereal production in Spain, wheat ranks first in importance both as regards the area sown and the crop harvested. The principal producing centres are the two Castiles, Leon, and Extremadura. In 1917 there were sowed 10,348,687 acres, yielding 3,693,428 tons. The production was short of the 1917 harvest and was in fact the lowest yield since 1914. The table appended shows the volume of wheat produced since 1913.

Year	Tons
1913	2,819,679
1914	3,119,448
1915	3,791,192
1916	4,145,751
1917	3,884,000
1918	3,102,428

The high-water mark in production was reached in the year 1916; and it has been argued that if such a harvest could be assured each year that Spain would be rendered practically independent of imported supplies. A query, however, arises in this connection, viz: If the Spanish Government is guaranteeing the individual producer for 1919 the sum of \$3.96 per bushel, will the Spanish consumer find it profitable to use bread made from home-grown flour when, with the eventual return to normal conditions, imported wheat may be had more cheaply? Already there is a lively protest against the increasing cost of bread in Spain.

At present, wheat almost exclusively of Argentine origin is arriving on the Spanish market, some 68,076 tons being imported during the first four months of 1919, but normally a harder wheat is demanded for mixing with the native-grown cereal, and herein lies the Canadian opportunity. The quantities to be sold may prove to be limited, but an effort could wisely be made to secure a part at least of whatever trade will offer in this line. In 1915 some 176,000 bushels and in 1916 some 132,054 bushels of Canadian wheat were imported although no exports are recorded from Canada for the years 1913, 1914, 1917 and 1918. In 1913 Spain imported altogether 174,311 tons of wheat, while the average importation for the quinquenniad 1911-15 amounted to 228,908 tons.

BARLEY.

The area sown in barley in 1918 amounted to 4,258,892 acres, giving a harvest of 1,970,342 tons. The yields for the 1913-18 period were as follows:

Year	Tons
1913	1,497,000
1914	1,573,544
1915	1,891,968
1916	1,891,211
1917	1,697,324
1918	1,970,342

Barley is most extensively cultivated in the two Castiles, Extremadura and in Andalusia. The average annual exports for the 1911-15 period amounted to 10,863 tons.

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RICE AND OATS

The following table illustrates the production of rice during the six-year period 1913-18:

Year	Tons
1913	470,000
1914	608,000
1915	600,000
1916	734,000
1917	694,000
1918	712,000

The area planted in 1918 was 1,839,752 acres.

Oats were sown over an area of 1,574,189 acres in 1918 and yielded 142,330 tons. The lowest yield over the 1913-18 period was in 1913 when the production was 334,000 tons, and the highest yield was in 1915 with 536,516 tons. The principal oat-growing districts are New Castile and Extremadura. In the classification of the leading Spanish exports, oats is given at 836 tons per average year during the period 1911-15.

MAIZE

The maize crop for 1918, *viz.* 613,250 tons, was the lowest of any one year during the period 1913-18. In 1913 the production amounted to 637,000 tons; in 1914 to 727,292 tons; in 1915 to 739,981 tons; in 1916 to 727,546 tons; and in 1917 to 746,026 tons. The area devoted to maize growing in 1918 was 1,182,712 acres. Maize figures in the principal Spanish exports to the extent of 4,629 tons per annum during the annus mundi 1911-15.

RICE

Of the other cereals, rice is the most important. In 1916 the yield amounted to 241,797 tons gathered from 101,500 acres. The most important rice-producing centres are the province of Valencia, followed by Tarragona, Gerona, Alicante, Castellon, Murcia and the eastern part of the island of Mallorca (Balearic Islands).

Rice normally is Spain's leading cereal for export, the average shipments being 19,165 tons per year during 1911-15.

LEGUMINOUS PLANTS

The area devoted to the growing of leguminous produce amounted in 1913 to 2,930,062 acres, yielding 509,394 tons, of chick peas, beans, peas, kidney beans, algaroba beans and other vegetables, apportioned as follows:

Product	Tons
Chick Peas	75,874
Beans	165,405
Peas	14,164
Kidney Beans	1,200
Algaroba Beans	8,007
Other leguminous produce	21,028
	<hr/>
	265,678

These products are most important in the national economy, constituting as they do a part of the daily diet of the poorer people. In the quinquennial 1911-15 Spain was able to export about 5,000 tons of chick peas annually, and of other leguminous products no 6300 tons. The acreage devoted to these crops has increased since 1913 and the production has also reached higher levels.

GARDEN PRODUCE.

More important, however, from an export point of view, is the garden produce raised in Spain, which in 1913 exported 69,958 tons of potatoes, 168,324 tons of onions and garlic (the best known Spanish onion, the Valencia Giant, goes almost altogether normally to Great Britain either for domestic consumption or for re-export trade), 19,874 tons of tomatoes, 4,517 tons of other garden produce, 10,488 tons of preserved vegetables, and 6,650 tons of pepper (ground and not ground). Valencia and Murcia contain the most important truck farms of Spain, while the total value of the garden produce grown amounts to about 275,000,000 pesetas annually. Over 1,100,000 acres are devoted to this kind of farming.

Canada's imports of Spanish vegetables amounted to \$28,262 in 1913, to \$45,751 in 1917, and to \$30,489 in 1918.

VINEYULTURE.

After cereals and sugar, the vine is the most important agricultural product of Spain. From it is derived the export trade in fresh grapes and raisins, and on it depends the important Spanish wine industry. The mean annual value of the Spanish vineyards now approximates 400,000,000 pesetas.

In 1918 the area devoted to grape culture amounted to 3,292,925 acres, the yield being 3,818,229 tons of grapes. Of this amount 3,620,956 tons were devoted to wine-making, some 22,567,618 hectolitres being produced. Raisins were made from 44,876 tons, the remainder of the production being consumed as fresh grapes. The area yielding grapes in 1917 was 3,125,400 acres, and 2,952,790 tons of grapes were picked. The most produced in 1913 was 17,105,203 hectolitres. In some years, such as 1915, cryptogamous diseases, particularly mildew and black rot, coupled with the persistent phylloxera, deleteriously affect the grape harvest. Only 1,970,958 tons of grapes were produced in 1915.

The regions in which the grape is most extensively cultivated are Catalonia, La Rioja, Andalusia, New Castile and Extremadura. It is interesting to note that the province of Barcelona alone possesses more vines than the eight Andalusian provinces.

FRESH GRAPES.

During the quinquennium 1911-15 the average annual export of Spanish grapes, which come principally from Almeria and Malaga, amounted to 54,109 tons. Normally the principal market is Great Britain, followed by Germany and the United States. The grapes are generally packed in barrels of 10, 20 and 23 kilogrammes.

CANADA'S IMPORTS OF SPANISH GRAPES.

Canada takes a certain quantity of this Spanish product, the figures for the last six years being as follows:—

Year	Pounds.
1913	231,291
1914	207,937
1915	31,244
1916	100,759
1917	236,492
1918	No Imports.

A direct steamship service between Canada and Spain during the shipping season from August to November would probably tend to increase these imports.

RAISINS.

Spain is also an important shipper of raisins, Denia in the province of Valencia and Malaga being the most important centres of this trade. During the five-year period 1911-15 the average exportation amounted to 18,334 tons. The raisins are

packed in boxes of 10 kilogrammes gross weight, 10 kilogrammes net, 5 kilogrammes net, 2½ kilogrammes net, 2 kilogrammes gross, 1 kilogramme gross, ½ kilogramme gross, in packages of 250 and 500 grammes, and in special *de luxe* parcels of 100-125, 200-250, and 400 to 500 grammes. One shipping house visited puts up thirteen different qualities of raisins.

Out of the total Canadian importation of raisins in 1913, amounting to 24,423,150 pounds, some 4,842,927 pounds are accredited to Spanish sources. In 1914 the imports increased to 7,350,722 pounds, or slightly more than one-third of the total importation. The government returns show that in 1918, however, only 189,910 pounds were entered at the Canadian customs as arriving from Spain, whereas 32,886,629 pounds out of a total of 33,187,420 pounds are entered as coming from the United States. In all probability at least some quantities of these raisins were of Spanish origin, as the pre-war direct line between Canada and the Mediterranean during the Spanish fruit shipping season of each year was not in operation in 1918.

WINES.

Subject to the climatic conditions of different parts of the country, various types of white, red and sweet wines and sherries are produced. The best known Spanish wines abroad in their natural state are the famous sherries and sweet wines of the Eastern coast from Tarragona to Malaga. The common red wine has been principally exported for blending with French wines. Great Britain has been Spain's best market for sherry and generous wines.

In the quinquenniad 1911-15 Spain exported 2,699,665 hectolitres of common wine, 126,343 hectolitres of sherries and 235,785 hectolitres of generous wines annually. In 1916 the figures were 3,988,088 hectolitres, 171,191 hectolitres and 274,118 hectolitres respectively. The average annual production of wines in Spain has been 17,844,367 hectolitres during the five-year period 1913-17, although the production in 1917 amounted to 23,762,644 hectolitres.

ALCOHOLS AND SPIRITS.

In 1917 Spain also produced 272,242 hectolitres of liquors and 711,822 hectolitres of various grades of spirits and alcohols.

CANADIAN IMPORTS.

Spanish non-sparkling wines have been the most largely imported into Canada, the figures for the six-year period being as follows:

Year.	France. Gallons.	Spain. Gallons.	Grand Total Importation. Gallons.
1913.....	243,400	261,687	505,087
1914.....	238,543	286,923	525,466
1915.....	18,000	240,771	258,771
1916.....	95,991	176,044	272,035
1917.....	7,000	149,170	156,170
1918.....	1,000	112,000	113,000

DREGS AND SKINS.

Another product of the vineyards worth over 13,000,000 pesetas annually are the dregs and skins from the wine industry.

THE OLIVE CROP.

The next most important branch of Spanish agriculture is the growing of the olive. In 1918 the area cultivated with this fruit was 3,898,065 acres, giving 1,403,813 tons of

olives. Of this amount 1,356,057 tons were used in oil production, yielding 255,202 tons of oil. The oil produced during the 1913-18 period was as follows:—

Year.	Tons.
1913	265,422
1914	267,761
1915	326,107
1916	267,115
1917	427,841
1918	256,232

The great olive oil producing centres of Spain are Andalusia, the Levant, Old Castile, Extremadura, and the four provinces of Catalonia.

In spite of the fact that the olive tree is of a hardy nature and of a drought-resisting character, and sometimes flourishes where little else will grow, the crop is often very irregular. Sometimes, as in 1917, the oil crop is over 427,000 tons, and at other times, as in 1912, the crop is below 65,000 tons when but 63,000 tons were produced. The average yield during a ten-year period was 200,000 tons approximately. The amount of rainfall considerably influences the quantity of olive oil produced, and hence the oils of northern and southern Spain differ considerably. The quantity of olive oil in the olive varies from 12 to 30 per cent according to the variety cultivated. It was stated that the present tendency in Spain is toward cultivating the olive which yields the finer oils of more delicate flavour and of greater transparency.

OLIVE AND OLIVE OIL EXPORTS.

Spain exported annually during the period 1911-15, 13,113 tons of olives and 48,524 tons of olive oil. In 1916 the respective figures were 23,986 and 88,852 tons. At one time the Spanish olive oil was to a large extent sent abroad, particularly to France and Italy, in a crude state, refined there, and afterwards exported as French or Italian olive oil. More recently, however, the Spaniards have turned their attention to refining the oil in their own country and a noticeable progress is taking place in this industry.

CANADIAN IMPORTS OF OLIVES AND OLIVE OIL.

The Canadian imports of olives and olive oil from Spain and the total quantities imported from all countries are given hereunder for the years 1913-18:

Olives.

Year.	From Spain. Gallons.	Total Quantity Imported Gallons.
1913	127,419	372,256
1914	79,419	150,204
1915	78,999	112,134
1916	49,214	113,916
1917	8,676	100,317
1918	70,727	166,429

Olive Oil.

Year.	From Spain. Gallons.	Total Olive Oil Imported Gallons.
1913	1,294	197,286
1914	3,104	183,191
1915	2,488	217,975
1916	11,209	191,785
1917	25,589	246,787
1918	28,013	146,979

Italy and France up to 1918 had been our largest suppliers of olive oil, but last year the Spanish exports (38,013 gallons) were higher than those of Italy (23,802 gallons) or of France (24,386 gallons), and were only surpassed by the declared exports from the United States, viz., 57,926 gallons.

It is of further interest to note that the Canadian returns for 1918 show the first declared importation of Spanish olive oil for soap manufacture and fish canning, the figures being 12,983 gallons out of a total importation of 33,124 gallons. The remainder are entered as from the United States.

Spain is also at present our most important supplier of olives in brine, although that place was held by Greece in 1913.

FRUIT FARMING.

The last official estimate gives 1,128,000 acres as devoted to fruit farming in Spain, the total value of the fruits grown reaching a value of over 261,050,000 pesetas.

ORANGES.

The orange yield is the most important as regards Spain's fruit trade, and averaged during the quinquenniad 1905-09, 839,531 tons, valued at 68,930,000 pesetas. In 1917 the crop gathered amounted to 569,065 tons, valued at 68,287,973 pesetas. The domestic consumption of oranges is very small, and the fruit is cultivated mainly for export. The principal producing areas are the districts of Valencia, Murcia, and Andalusia, the first named province exporting one-third of the total orange crop of Spain. About 122,000 acres are devoted to orange cultivation.

What are known to the trade as "bitter oranges" come from the Seville district. These are largely exported to England for marmalade-making, and the trade is almost exclusively exploited by English capital.

During the quinquenniad 1911-15 Spain's annual exports of oranges averaged 501,536 tons. Normally about one-half of the production goes to England.

CANADIAN IMPORTS OF ORANGES.

According to Canadian Government returns, the value of oranges imported from Spain was \$7,327 in 1913, \$17,967 in 1914, \$20,390 in 1915, \$11,957 in 1916, \$21,847 in 1917, and \$23,495 in 1918. The value of the Spanish exports has more than trebled during this period, while the value of the exports from Italy has fallen from \$12,380 in 1913 to \$7,609 in 1918.

ALMONDS.

The Spanish almond trees yield about 25 per cent of the world's supply, the other sources of production being Italy, Greece and Asiatic Turkey.

During the quinquenniad 1905-09 the Spanish production of almonds averaged 99,773 tons, valued at 49,264,000 pesetas. In 1917 the crop yielded 100,929 tons. The leading centres of production are Alicante, Malaga and the Balearic Islands. As an agricultural product, the almond tree is especially profitable as all of it is put to some use, the nut, the wood, leaves and shells.

The "Jordan" almond, or large and best quality almond, is exported principally for table consumption, while the ordinary or smaller size "Valencia" almond finds its principal use in confectionery manufacture. The sweet almond is also used for making medicinal oil and cold cream, while from the oil of the bitter almond, soap and powder are manufactured. Almonds in the shell are shipped generally in jute sacks containing 122 pounds or one fanega, while the shelled or cleaned almonds are packed in wooden boxes holding 28 pounds. Two of the largest almond-sorting and shipping plants in southern Spain were visited, and it was interesting to note how every "Jordan" almond was handled at least once, while the culling of the best varieties of "Jordan" almonds necessitates a picking over at least three times. The sorting plants are almost entirely operated by women.

As the almond crop is not perishable, the abnormal conditions in shipping during the war did not cause the same loss to the almond merchants as to the fruit dealer, although scarcity of vessels and enhanced freight rates naturally curtailed shipments.

Spain's average exports of almonds during the five-year period, 1911-15, amounted to 11,571 tons. The leading markets have been London, Hamburg, Marseilles and North and South American ports. The shipping season is from September to December.

ALMOND EXPORTS TO CANADA.

Spain leads in the exports of almonds to Canada, the following tables showing the total quantities imported and the quantities supplied by Spain during the 1913-18 period:

Almonds not Shelled.

Year.	From Spain. Pounds.	Total Quantity Imported. Pounds.
1913.....	373,411	991,235
1914.....	191,904	684,641
1915.....	330,666	632,017
1916.....	363,166	668,811
1917.....	295,789	733,155
1918.....	299,395	804,367

Almonds Shelled.

Year.	From Spain. Pounds.	Total Quantity Imported Pounds.
1913.....	868,783	1,217,122
1914.....	767,928	1,026,197
1915.....	581,721	831,927
1916.....	499,879	887,766
1917.....	829,782	1,258,746
1918.....	605,505	1,214,782

The heavier arrivals latterly declared from the United States would seem to indicate that some Spanish almonds are entering Canada as re-exports from the United States. Almonds are also re-exported from France and England to Canada.

HAZELNUTS AND PEANUTS.

The Spanish hazelnuts which come from the province of Tarragona are also of commercial importance. Some 9,841 tons were exported annually during the quinquennial 1911-1915. The peanut has only of recent years been introduced into Spain and those grown are generally small or of but average size. The home production, however, besides satisfying the domestic consumption, allows some for export, and in 1913 5,364 tons were exported.

MELONS AND PLUMS.

The melons of Valencia, Murcia and Andalusia are of a fair quality and in normal times are shipped extensively to British ports. In 1913 the total exportation was 7,789 tons.

Plums, of which there are more than fifty varieties cultivated, yield on an average 26,000 tons annually and form the basis of the important industry of preparing prunes, which is carried on in the Vascongadas and Guipuzcoa provinces. The drying is done in the villages by exposure to the sun and quite considerable quantities of the dried fruit are exported to France.

LEMONS.

The lemon crop is about 35,000 tons annually. The exports in 1917 were 7,105 tons.

Citric acid and lemon essence are made to a small extent but the fruit is principally used for table purposes at home. Spanish lemons up to the present have had little interest for Canada.

FIGS.

Among the various Spanish fruit crops, the cultivation of the fig occupies a prominent place because of its widespread growth and because of its use as a food product, the dried fig serving as a common food for a large part of the poorer classes. In years of great abundance, moreover, the fig is used for fattening pigs.

The fig tree grows throughout the peninsula, but reaches its highest development in the south of the peninsula and in the Balearic Islands. Government agronomists a few years ago estimated that the value of the product of the fig trees is surpassed only by the orange, the almond, the carob and chestnut in the order named.

About 151,000 tons of figs are produced annually, and 5,156 tons of dried figs were exported in the year 1913.

Canada's imports of dried figs from Spain were as follows during the last six years:

Year.	Pounds.	
	From Spain.	From all Countries.
1913	21,764	4,491,294
1914	8,715	3,277,450
1915	4,118	3,179,422
1916	18,226	3,741,471
1917	27,844	4,222,097
1918	40	2,190,446

Turkey, the United States and Portugal are the chief suppliers, normally, of figs to Canada. Spain in the Government returns stands fourth.

OTHER PRODUCTS.

The average annual yield of the other principal fruits are given hereunder:

	Tons.
Almonds	41,742
Apples	21,448
Apricots	2,448
Cherries	15,047
Oranges	48,000
Peaches	41,447
Pears	18,140
Walnuts	1,468
Guavas	310,998
Figures	70,746

These fruits are mostly used for home consumption and are of little interest as regards exportation, except the peach and apricot, which form the basis for an important fruit-pulp and jam industry, which in these two lines especially is devoted to export trade. In fact the preserved fruit industry in Spain may be classified as one of the leading industries, and considerable quantities of Spanish fruits are well put up both in tins and bottles.

CANADA'S IMPORTS OF SPANISH TINNED FRUITS.

Canada has imported relatively small amounts of canned fruit from Spain, the figures for 1913 being 60,657 pounds, for 1914, 118,403 pounds, and for 1918, 91,180 pounds.

RESUME OF FRUIT EXPORTS.

The total quantity of all the Spanish fruits exported in 1913 amounted to 710,050 tons, valued at 144,000,000 pesetas, to which must be added the fruit pulp and preserved fruits exported, which in 1913 totalled 7,223 tons, valued at 1,805,950 pesetas.

SUGAR GROWING.

Both the sugar beet and the sugarcane are grown in Spain, but while the production of refined sugar from the former shows a fairly steady rise in volume, there is registered a corresponding decline in that refined from the cane. The production for the last eight years is given hereunder:—

Year.	Cane Sugar.	Beet Sugar.
	Tons.	Tons.
1915	16,176	93,213
1916	12,231	113,755
1917	7,376	139,355
1918	5,595	104,845
1919	4,264	100,444
1916	4,584	126,254
1917	1,009	125,516
1918	6,644	139,572
1919 (estimated)		

Normally Spain supplies almost all her own sugar requirements, imports in 1914 amounting to only 6 tons. Imports, however, rose as follows: in 1915, 18 tons; in 1916, 18,330 tons; in 1917, 39,172 tons; and in 1918, 15,194 tons. The explanation of this reversal may be had in the fact that Spain during the war became an exporter of sugar, and as her exports were heaviest when her imports were practically negligible the reserves in the country were seriously drawn upon. In 1911, for instance, 11,472 tons were exported, and in 1915, 8,756 tons. The greater part of the imports since 1916 have, however, been probably used at home as the exports in 1916 (2,531 tons), in 1917 (4,582 tons), and in 1918 (631 tons), have been much lower than in the immediately preceding years.

The sugar refiners are at present demanding a very high tariff on imported sugar as they fear with the return of lower freight rates the local manufacturing will prove unprofitable. The present duty on sugar is 60 pesetas per 100 kilogrammes.

The number of factories actively engaged in the cane sugar industry was 17 in 1916, 16 in 1917, 15 in 1918, and 9 during the current year. In the beet sugar industry the figures are as follows: 1916, 27; 1917, 31; 1918, 31; and in 1919, 28.

SAFFRON AND LICORICE.

The cultivation of saffron is worthy of note in passing, as it is a specialty of Spanish agriculture. In 1917 there were 31,015 acres under saffron cultivation, the crop amounting to 124 tons. In 1918, 97 tons were exported, valued at 9,723,900 pesetas. Another agricultural export of some importance is licorice, some 2,495 tons, valued at 1,274,418 pesetas, being exported in 1918.

FLAX AND HEMP.

In 1917 some 1,440 acres were devoted to flax growing, chiefly in the provinces of Galicia, Asturias and Leon, yielding 1,449 tons of flax altogether and 856 tons of fibre.

The native hemp production amounted to 13,332 tons, gathered from 15,745 acres, although the actual fibre obtained only totalled 7,394 tons.

Both flax and hemp cultivation are gradually losing their importance in Spain, jute from India and hemp from Italy being imported for the native industry. Home-grown and imported flax are both employed in the making of linen, fine damasks, and handkerchief linens.

SILK COCOONS.

Spain stands next to Italy in the production of silk cocoons. The average annual production since the beginning of the century has been 711 tons, of which two-thirds are raised in the province of Murcia, where climatic conditions favour the growth of the mulberry tree. The greater part of the raw silk produced is exported to the injury of silk weaving in Spain. The Government is encouraging the cultivation of the mulberry tree by the granting of premiums, and experiments recently made to increase the

cocoons from a given quantity of eggs have resulted in augmenting the number by about 25 per cent. There are moreover twenty-seven schools for the study of sericulture in the different provinces, while three important silk associations in Barcelona, Murcia and Sevilla are interested in promoting sericulture and silk textile manufacturing in Spain.

SPANISH FORESTS.

The Iberian peninsula, ranging from 1,969 to 2,297 feet in elevation, is composed of various plateaux traversed by steep mountain ridges, many of which are sterile, while others afford a certain amount of pasturage and still others are covered by forests of pine, which constitutes the most important commercial lumber of the peninsula. It has been recently estimated that the forest area of Spain covers altogether about 27,100,000 acres, of which about 9,800,000 acres are more or less regularly wooded. The number of pines in Spain are calculated at over 10,000,000, covering an area of approximately 300,000 acres.

CORK.

The cork forests extend over 610,000 acres, the principal growing centres being the provinces of Gerona (198,000 acres), Huelva (133,000 acres), Caceres (80,000 acres), Sevilla (69,000 acres), and Cadiz (49,000 acres). Cork is a species of tree resembling the oak and like it bearing acorns, and is so constituted that its bark can be removed every seven to ten years without damaging the tree itself. In Catalonia the cork tree is actually felled for its timber, but it is the manufactures connected with its bark which give such importance to this tree.

In 1912 there were produced in Spain some 78,000 tons of corkwood or raw cork, of which a little over two-thirds came from the province of Seville. The yearly production averages about 50,000 tons.

In 1913 Spain exported 9,564 tons of manufactured cork, 3,912 tons of cork planks, and 44,410 tons of cork dust. Sales of manufactured cork products have been particularly confined to the United Kingdom, as most countries have had a fairly high protective tariff on the finished article.

THE CORK INDUSTRY.

Normally there are between 30,000 and 40,000 operatives engaged in turning out the various cork products manufactured in Spain, e.g., bottle stoppers, discs, shoe soles, fishnet floaters, life-preservers, cork paper for cigarette tips, and hats for the military and police. Cork in sheets and planks is used for building and floor coverings, while cork waste is utilized in linoleum-making. As is evident from the foregoing, the raw material comes principally from the south, although the manufacturing is now centred in Catalonia where there are several well equipped factories. The industry at Seville and throughout southern Spain is not so flourishing as formerly, although one of the most important cork companies in Spain is located in that city and in spite of the fact that there are many villages throughout the south where cork manufacturing gives considerable employment.

ESPARTO GRASS.

Esparto grass, used in the manufacture of high-class writing and printing paper, especially in England and Scotland, is one of Spain's most distinctive products. In fact Spain is the only European country producing this grass. Although greater supplies are obtained from the northern coast of Africa (Algeria, Tunis and Tripoli), yet in a normal year Spain sends about 40,000 tons of the first quality esparto grass to the United Kingdom for papermaking. The Spanish growth is confined to the ferro-calcareous soil of southeastern Spain, in the provinces of Murcia, Albacete,

Granada and Almeria. The production is especially decreasing as the grass is hardly susceptible to cultivation, and as the esparto areas become barren the lands are gradually being put under other crops.

OTHER INDUSTRIES DEPENDENT ON FORESTS.

Besides the cork and esparto products of the Spanish forests, there are several other relatively important industries connected with Spain's forestal resources, viz.:

1. The sawing of lumber, principally pine, for general construction purposes, pit props and box shooks, etc.
2. The cutting of oak railroad ties.
3. The making of chestnut barrel stock.
4. The construction of furniture from various native woods.
5. The production of charcoal.
6. The extraction of juniper oil, resin, tannin, turpentine, and licorice.

ANIMAL WEALTH.

The number of farm animals existing in Spain in 1918 amounted to about 31,101,576, of which it is estimated about 2,500,000 were work animals, comprised of mules, asses, oxen and draught horses. As in mountainous countries, the great importance of the mule in Spain is self-evident, and the Spanish mule is considered not only strong but fatigue resisting.

The sheep (including the famous "merino" type, highly prized in England, France and Germany for breeding purposes) and goat predominate in Andalusia, Extremadura and Leon, the horse in Extremadura and Valencia, the mule and ass in Aragon, Castila and Extremadura, the pig in Extremadura, Andalusia, Salamanca, and the Balearic Islands. If the fixed figure of 100 be taken as representing the number of Spanish farm animals existing in 1912, the index number representative of the year 1918 would be 118. Thus an upward movement is noticeable in the animal wealth of Spain.

NUMBER OF ANIMALS.

The number of different farm animals in Spain was officially estimated to be as follows in 1918:

DESCRIPTION	NUMBER
Horses	557,676
Mules	1,912,894
Asses	922,906
Cows	3,233,206
Sheep	17,217,210
Goats	4,181,212
Pigs	3,912,449
Camels (Canary Islands)	5,100

THE FISHING INDUSTRY.

In the Spanish fisheries the number of boats employed amount to approximately 791 steamers and about 14,721 sailing boats. In 1916, 88,150 men were employed in the fishing fleet. The average catch of fish amounts to about 145,000 tons annually, over 33,000 tons being caught in the El Ferrol district, which comprises the northern and western coasts of Spain. The other big fishing districts are found at Cadiz and Cartagena. Spain consumes about 120,000 tons of domestic fish a year, thus leaving between 25,000 to 30,000 tons annually for export. The most important catches are sardines, tunny fish and cod. There are about 1,400 factories in Spain engaged in treating and preserving fish. Over 1,000 of these are in the maritime district of El Ferrol. Some 50,000 tons of fish are salted, canned, or prepared in brine, in the above factories, where some 20,000 operatives are employed. The total value of the fish caught in Spanish waters during 1916 amounted to 901,833,250 pesetas, while the export of sardines and preserved fish was valued at 27,387,985 pesetas.

MINERAL WEALTH.

Spain is rich in minerals. Iron is abundant in the provinces of Viscaya, Santander, Oviedo, Navarra, Huelva and Sevilla; copper in the provinces of Sevilla, Cordoba, and Huelva; coal is found in Oviedo, Leon, Gerona, Valencia and Cordoba; zinc in Santander, Murcia, Guipuzcoa, and Viscaya; lead in Murcia, Jaen and Almeria; manganese in Oviedo, Huelva and Sevilla; quicksilver in Ciudad Real and Oviedo; cobalt in Oviedo; silver in Guadalajara; sulphate of soda in Burgos; salt in Guadalajara; sulphur in Murcia and Almeria; phosphorus in Caceres and Huelva; platinum in Rhonda; and potassium salts in Barcelona.

PRINCIPAL VARIETIES OF MINERALS FOUND.

The principal varieties of minerals found in Spain, together with the quantity of their production in 1916, are given hereunder. (These figures are the latest available.)

Mineral	Tons
Iron	14,295,204
Coal	14,295,204
Mercury	14,295,204
Silver	14,295,204
Copper	14,295,204
Zinc	14,295,204
Lead	14,295,204
Manganese	14,295,204
Quicksilver	14,295,204
Cobalt	14,295,204
Silver	14,295,204
Sulphate of soda	14,295,204
Sulphur	14,295,204
Salt	14,295,204
Phosphorus	14,295,204
Platinum	14,295,204
Potassium salts	14,295,204

VALUE OF THE MINES.

The total amount of minerals taken in 1913 amounted to 61,700,089 tons, valued at 269,744,912 pesetas at the pit mouth, while the output for 1916 was considerably lower, some 14,295,204 tons being produced, although, owing to higher market prices the monetary value, 382,855,785 pesetas, was much higher. The number of productive mining concessions in 1916 was 2,009, covering an area of 279,767 hectares, as compared with 2,303 concessions in 1913. There has also been a perceptible falling off in the number of workmen employed, the figures for 1916 and 1913 being 118,183 and 143,950 labourers respectively. In 1916, 3,644 machines were employed in the mines and smelting works using 233,019 horse-power.

IRON ORE.

In the year 1913, Spain's iron ore production (9,861,668 tons) reached the highest mark since 1907 (9,896,178 tons). There was a dropping off, however, in the output during the years following the outbreak of the war, and in 1916 only 5,856,861 tons were extracted. The principal producing centres are along the northern littoral in the provinces of Viscaya and Santander, and in the south at Almeria. Interior deposits, owing to lack of transport facilities, are not yet worked profitably.

Normally, the greater part of the iron ore output is exported, and of the approximately 10,000,000 tons produced in 1913, some 9,000,000 tons were shipped abroad leaving 1,000,000 tons for home manufacture. Smaller production in 1916 allowed

only 2,743,487 tons for export, which was increased to over 5,000,000 tons in 1917. Between 1870 and 1914 Spain exported 230,000,000 tons of iron ore, three-fourths of which went to Great Britain.

It has been estimated by experts that Spain's reserves of iron minerals amount to 900,000,000 tons. If it be calculated that 900,000,000 tons of ore will produce approximately but half that amount of pig-iron, it will be seen that, provided the above estimate is correct, the development of these deposits must of necessity be limited. England's pre-war output of pig-iron would consume that quantity of ore in forty-five years. Spanish ores are practically all hematite, and generally range from 45 per cent to 60 per cent of metallic iron.

As in Germany 80 per cent of the steel produced is by the basic process, that country has been in a position to take the lower grade Spanish ores, i.e., high in sulphur and silicon, whereas Great Britain, producing approximately a similar percentage by the acid process, has demanded the best Spathic and rubios (i.e., ore, high in metallic iron and low in sulphur and silicon). This latter is being gradually used up, and the inferior grades will increasingly be offered by Spain to the world's markets. It may further be noticed that with the decline of the iron ore trade of the Bilbao and Santander districts, there will come in all probability a development of the interior deposits, and the construction of the necessary railway facilities to transport the ore to the shipping ports.

The principal iron ore holdings in Spain are in British, French and Spanish hands. The Krupp firm had a 25 per cent interest before the war in one of the large British companies.

COPPER.

Spain normally produces about 3,000,000 tons of copper annually, the most important deposits being in the provinces of Huelva and Sevilla, where are found extensively-worked iron pyrites mines, the ore contents oscillating from 0.5 per cent to 5 per cent copper, 35 per cent to 49 per cent sulphur, with proportions of iron and silica. Here the size and suitability of the deposits allow open working of the mines.

The other principal copper mines are in the province of Cordoba, Badajoz, Ciudad Real, and Jaen, but their exploitation is not so remunerative as the copper ores must be handpicked, crushed, and concentrated before they are ready for the smelters. Moreover, these deposits are worked with much more difficulty as they are generally smaller and at greater depths. The pyrites of the Huelva district, on the other hand, yield with comparative ease a high-grade precipitate, a fact which renders the Leaching system more profitable.

It is stated that all the important mines are either now being worked, or their concessions already granted, although experts are of opinion that the copper output of the mines now being exploited can be readily increased threefold. The famous Rio Tinto mines in the province of Huelva own deposits containing iron pyrites from 2 to 4 per cent copper of more than 100,000,000 tons, while it is estimated that some 20,000,000 tons are accessible in other provinces.

LEAD.

The output from the lead and silver-lead mines of Spain amounted to 260,282 and 7,370 tons respectively in 1916. In 1913 the figures were 279,878 and 23,600 tons, and in 1907 the lead mines yielded 113,632 and the silver-lead mines 163,289 tons. The data existing concerning this mineral are very incomplete, but a life of from twenty-nine to thirty years may be estimated for these mines on the basis of their present annual production. In 1916, 1,788 tons of lead were exported, and 385 tons of silver-lead ore. The province of Jaen is the centre of the lead-mining industry, although deposits are also found in Huelva, Sevilla, Cordoba, Granada, etc. In 1914 there were 320 productive lead mines in operation.

ZINC

Although the zinc mines have been worked for a number of years, they are still important to the provinces of Asturias and Santander, and it is estimated that the life of the mines is good for a number of years. In 1907 the production amounted to 191,855 tons, in 1913 to 171,311 tons, and in 1916 to 166,000 tons. The deposits are made up of beds of black ore, and white, the content of zinc sulphide. Calamine is rarely found, while lead is more abundant than zinc. The present zinc requirements of the country are small, and the zinc is not sufficient to compete for production, and in 1916 some 100,000 tons were imported.

COPPER

Almost all the copper ore is derived from Spain, the centre of production being Almaden in Central Spain. In 1907 18,781 tons of copper ore were produced, in 1913 19,660 tons, and in 1916, 19,700 tons. The average content of the Almaden ore is stated to be between 8 and 9 per cent, although the richest ore contains up to 20 per cent copper. These mines are wholly owned and worked by the State, but it is stated that one day and a half of the output is being taken up in the production of copper wire for the telephone. It is estimated that the mining of copper in the Spanish mines extends over a period of 12 per cent of the year.

COAL

The coal production in Spain has steadily increased since 1913 to-day. In the years before the war, Spain imported about 5,000,000 tons a year, 2,000,000 tons being imported locally and 3,000,000 tons imported. Great Britain was responsible for approximately 2,500,000 tons, Germany for 300,000 tons, and the United States for 500,000 tons. In 1913 the coal requirements of the country rose 6,000,000 tons, and today they are estimated at between 7,000,000 and 8,000,000 tons. The question therefore arises as to how to increase the output to satisfy domestic requirements, in view of the continuing of supplies from overseas. Not only has Spain, by government protection and treasury measures, been able to achieve this desired end, but even the possibility of exporting coal is now being mooted, although the latest advices indicate that the Government has decided for the present to prohibit its export in order that prices may not unnecessarily be advanced.

It is estimated that the Spanish coal fields contain an actual reserve of coal and lignite amounting to about 8,500,000,000 tons, extending over an area of 3,340 square miles and located in nine different provinces, the most pronounced carboniferous district being Asturias, where the actual reserve is said to be 3,200,000,000 tons, while the province of Terner has 650,000,000 tons of mineral lignite.

The total production of coal during the years 1913-1916 is given hereunder:-

	1913	1914	1915	1916
Spain (all)	2,781,000	2,800,000	4,120,000	4,811,400
Almaden	18,781	19,660	19,700	19,700
Others	2,762,219	2,780,340	4,100,300	4,791,700
Total	4,543,219	4,819,660	4,139,700	4,831,100

In 1917 the total quantity mined amounted to 5,972,000 tons, and in 1918 to 7,164,000 tons, i.e. an increase over 1913 of 2,871,000 tons.

If, however, the war-period question was how to produce more coal, the question to-day, with the Spanish output practically equivalent to the Spanish consumption, is how best to protect the national industry; and various schemes are being urged on the Government to make Spain independent of foreign supplies. It is feared that a contraction of the home demand, consequent to the peace, may take place, and if

imported from abroad, the prosperity of the coal mines achieved during the war and the early post-war years, unless protection is given and exportation allowed. It seems reasonable to suppose therefore that the Government will continue to aid this native industry, although it may happen with Spain's industrial expansion that her coal production will not be adequate for her requirements. It is interesting to note in this connection that during the first four months of 1919, Spain imported 234,526 tons of coal, 211,789 tons of which arrived from Great Britain.

It has to be remembered that the Spanish mines contain numerous veins of coal, some of them not only with difficulty owing to the incessant supply, the relatively poor quality obtained, the frequent danger of fire-damp, while the beds are irregular, terminating with narrow and long deposits. It is stated that the mines of Leon and Palencia, hemmed in by rocky formations, are so irregular that in some places good seams often run through vast, sterile strata where the result of mining is only a few feet of coal. In addition, many coal beds are relatively so small that the expense of mining and transportation is hardly warranted, while again the distance of some of the most important centres of exports renders transportation inconvenient, and the cost of fuel for the railways is high. Moreover the lack of railway facilities and export collieries are a great drawback to the Spanish industry.

It is of interest to note in passing, that whereas each collier in the United States produces in 1918 the product of 800 tons, and the English collier the 232 tons, the collier in Spain only produced 109 tons. This is attributed in part to the inferior quality of the coal, in part to the light tools usually employed, and in part to the small size of the mines.

SALT.

Spain's output of salt in 1907 totalled 605,895 tons, in 1913 only 60,420, although in 1916 the production reached 895,928 tons, which was slightly lower than in 1914, when the production was 927,767 tons. In 1916 Spain exported 423,034 tons, and in 1917, 574,250 tons.

Spain's salt is exported to Canada for use in the dried fish industry, the declared values for the 1917-18 period being as follows:

Year.	Quantities (cwt.).	Total Quantities Imported (cwt.).
1913.....	367,823	2,797,272
1914.....	440,000	2,000,000
1915.....	440,000	2,000,000
1916.....	420,000	2,772,724
1917.....	479,045	3,169,710
1918.....	523,595	3,547,916

OTHER MINERALS.

Spain possesses small deposits of wolfram, tin and sulphur, principally in Extremadura, Zamora and Galicia, but the deposits are of no great commercial importance. The manganese mines are also not very important, although some are being worked on a small scale in the provinces of Huelva and Asturias. There are other mines, however, as yet unworked, in the province of Lugo, which contain highly manganiferous minerals.

Recent reports indicate that potash salts have been discovered on the borders of the Pyrenees in the localities of Lerida and Huesca. Other deposits exist at Torre Vieja, Cadiz and Torrelavagan. It is also interesting to note that in October, 1915, important platinum deposits were discovered near Rhonda.

Spain possesses comparatively large resources of building material, such as marble, limestone, granite and slate. Bauxite, too, exists in certain localities.

Mention may also be made of the mineral waters of Spain, which are scattered over almost every province, particularly in the more mountainous country.

VALUE OF PRODUCTS DERIVED FROM MINES

Spain's mineral wealth forms the basis of important industries, whose production amounted at 57,800,000 pesetas in 1916, the last year for which official statistics are available. Copper, however, is the most valuable mineral product, as manufactured in that country.

Province	Value, Pesetas
Albacete	1,000,000
Almeria	1,000,000
Asturias	1,000,000
Avila	1,000,000
Badajoz	1,000,000
Baleares	1,000,000
Barcelona	1,000,000
Burgos	1,000,000
Caceres	1,000,000
Canarias	1,000,000
Cantabria	1,000,000
Castile	1,000,000
Castile-La Mancha	1,000,000
Cataluna	1,000,000
Extremadura	1,000,000
Galicia	1,000,000
Granada	1,000,000
Guipuzcoa	1,000,000
Huesca	1,000,000
Jaen	1,000,000
La Rioja	1,000,000
León	1,000,000
Lleida	1,000,000
Madrid	1,000,000
Malaga	1,000,000
Murcia	1,000,000
Navarra	1,000,000
Palencia	1,000,000
Pamplona	1,000,000
Ponente	1,000,000
Segovia	1,000,000
Seville	1,000,000
Soria	1,000,000
Tarazona	1,000,000
Terrace	1,000,000
Torres	1,000,000
Valencia	1,000,000
Valladolid	1,000,000
Vizcaya	1,000,000
Zamora	1,000,000
Zaragoza	1,000,000

THE METALLURGICAL INDUSTRIES.

The metallurgical plants are located principally in the provinces of Viscaya and Navarra, and at the last census of 1911 numbered fifty establishments, although the war has added to the national strength of this industry.

THE IRON AND STEEL INDUSTRY.

In pre-war years Spain produced on an average between 450,000 and 500,000 tons of pig-iron annually, while the calculated yearly increase during the war is stated to be about 200,000 tons. It has been further estimated that Spain will be able eventually to turn out three times the pre-war production of pig, and in such an eventuality will be in a position to export as it is unlikely the national industry will consume the total output. Both hard-grained pig and foundry pig are manufactured, and the country is practically independent of foreign supplies except pig for the production of very fine castings. Not only the native ore, but scrap iron to some extent is used in the manufacture.

Sixty per cent of the iron and steel industry is in the hands of a powerful syndicate, which directs several individual companies, regulates prices and distribution, gives preferential rates to its customers at the end of each year, and which practically controls the industry in its larger ramifications. The seat of this company's operations is near Bilbao, and its blast furnaces, converters, and rolling mills were visited by the writer.

Among the iron and steel products made in Spain may be enumerated ingots, blooms, billets, slabs, small and large iron castings for railways, mines and shipbuilding.

products
manufactured

... and numerous other iron and steel articles, such as tools, ornamental ironwork, and machinery up to 10 and 15 tons, various engineering castings, rails, sheet iron, and various other and large industrial pieces such as grinders, pumps, etc. Greasings, bearings, rollers and various castings, the iron, wire cable, nails, bolts and nuts, etc.

Although the country is said to exercise a predominant influence in the Spanish iron and steel trade, yet it is to be remembered that there are numerous iron- and steel-works in central and northern Spain, some small, some large.

The last official census of 1911 places the number of Spanish furnaces at 204, and the number of rolling mills at 1,000. About 100,000 tons of iron and steel products are produced annually, the most of the output consisting of rolled steel. Spanish reports of iron and steel products averaged normally 50,000 tons, derived chiefly from England, Italy, and Germany, and the United States.

OTHER METALLURGICAL PRODUCTIONS.

Spain is the most important European country for lead production and stands second in the world's lead-producing countries, being only preceded by the United States. About 200,000 tons of lead in bars are produced annually, and this industry is of great importance owing to the amount produced, the value of the production, and the quantity exported.

The furnaces for the reduction of mercury at Almaden are said to be the largest in the world. These furnaces are vertical, cylindrical, 6.56 feet in diameter and 19.69 feet high. The mercury ore ranges from 1 to 25 per cent pure mercury and is graded as superior, medium, and poor. The mercury is sold in flasks containing approximately 76 pounds.

The principal zinc minerals treated are calamines and blendes, which are prepared, washed and smelted in the furnaces, the production being sold in bars, lumps, cakes, sheets and in manufactured articles.

An impulse has been given to manufacturers of copper in connection with the development of the Spanish electrical industries.

THE TEXTILE INDUSTRIES IN SPAIN.

Spain possesses many important textile manufactories, including the production of cotton, woollen, silk, linen, hemp and jute goods, and though dependent mostly on foreign sources of supply for the various raw materials used, except in the case of woollen goods, the development has been steady, while the impetus received by war demands, stimulated an unprecedented activity, and rendered the industry in its different branches stronger than ever.

One of the world's great centres of cotton-goods manufacturing is situated in Barcelona and neighbourhood, where is turned out 86 per cent of the national production.

Over 100,000,000 pesetas is invested in this industry, which numbers over 3,500 factories and employs 175,000 hands. The yearly output is valued at 640,000,000 pesetas. The industry as a whole operates about 2,130,000 spindles, of which 2,000,000 are employed in Catalonia, 60,000 in Malaga, and 40,000 in the northern provinces of Spain. The greater part of the factories in the Barcelona district (or 1,600,000 spindles) employ water-power derived from the Llobregat and Ter rivers and during the last years of the war were operating day and night. There are about 70,000 cotton looms, 45,000 of which are found in Catalonia, the other 5,000 being situated in Andalusia and the northern provinces.

Cotton piece-goods, velvets, and yarns in all grades are manufactured, as are also woven garments and various kinds of knitted goods. Spinning and weaving, dyeing, printing and finishing processes are carried on in up-to-date mills, and the whole industry is equipped with modern plant and machinery.

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An extensive export trade is carried on, mainly, principally with the S. American countries and the Near East, the total annual exports during 1914 averaging 8,171 tons. In 1916 the exports were 12,795 tons.

THE WOOLLEN INDUSTRY.

The production of woollen goods ranks second in the Spanish textile industries. Some 10,000,000 pesetas are invested in over 2,000 factories employing about 12,000 operatives. This industry, especially the spinning branch, is more widely distributed throughout the peninsula, although the largest number of factories are concentrated in Barcelona (660), followed by Alcala (25), Burgos (119), Gerona (110), Seville (119), and Teruel (50).

The wool chiefly used is of domestic origin, although it is frequently washed and combed in other countries and then re-exported to Spain. The smaller quantities of imported wools used are purchased normally in France, England, and Belgium, more or less. Wool waste, raw woollen rags or yarns, is also extensively used, the spinning being mostly by an acid immersion process. Naturally as the wool scouring depends on this method of washing in acids or vats, but a good deal of modern apparatus is also employed. Catalonia, with its abundance of suitable water and also derived from its olive oil industry, affords special facilities for this scouring process. The dyeing process consists in spreading out the wool on a frame, setting frames, which are then, or it is dyed in mechanical driers. Weaving, finishing, finishing, and finishing, and so on, are all done principally in Catalonia, especially in the latter part of the process.

During the year ended 1914-15 the value of woollen textiles was approximately 1,019,750,000 pesetas valued at 108,643,400 francs, or an export of 1,000,000,000.

THE SILK INDUSTRY.

The silk industry, employing over 12,000 operatives, is the same for many years, but the industry is situated in Barcelona, and mainly in Valencia, where it is distributed chiefly between Tarragona, Murcia, and the Balearic Islands. The total invested resources amount to 5,000,000 pesetas, the total annual production averaging 75,000,000 pesetas. This industry is gradually losing its former importance, and the Government has recently been taking steps to stimulate and revive its export trade. The greater portion of the raw silk produced is exported, as previously stated, due to the disadvantage of the Spanish silk-weaving industry.

OTHER TEXTILES MANUFACTURE.

The hemp, flax and jute textile industries have also a certain importance. In 1913, the total number of establishments engaged in spinning and weaving hemp jute and linen goods, amounted to 779, some 141 plants being situated in the province of Barcelona, 66 in Alcala, 60 in Huesca, and 33 in Zaragoza. The increasing demand for such textiles during the war gave a certain stimulus to these industries. The linen industry is, of these three, the best developed.

YARNS.

The hand-made Spanish yarns are well known, and their spinning is carried out throughout the peninsula, but principally in Catalonia, Gerona, and Almeria.

THE LEATHER INDUSTRIES.

According to the last official enumeration, Spain has some 1,361 establishments engaged in manufacturing leather goods of various kinds. The province of Barcelona leads again in contributing centres, about 400 tanneries and finishing plants being here located. The province of Palermo has 159, Valencia 199, and Gerona 9.

Domestic hides are utilized chiefly and the tanning process is carried on by the *curtido* vat system. During the war the heavy demand for coats and shoes and other leather products gave a pronounced fillip to this national industry and considerable quantities of raw hides were imported.

The coat and shoe industry is centred in the Balearic Islands and Barcelona, and very good boot is turned out at a moderate price. Leather belting for industrial uses and heavy leather goods are also manufactured.

THE PAPER INDUSTRY.

Paper manufacturing is one of Spain's oldest industries, and its production has steadily increased in importance. This trade is almost exclusively in the hands of the *Papelera Española*, which controls and operates the majority of the most important mills in the country. The last industrial census showed that 334 factories were employed in turning out different grades of paper, e.g., ordinary newspaper, cardboard, bookbinding, cigarette and hand-made paper. Newspaper manufacturing, some 2,000 tons annually, is centred at Tolosa, in northern Spain, while tissue and cigarette papers are produced principally at Avila. The quantity of the good Spanish paper produced amounts to about 27,000 tons annually, and enjoys a well-earned reputation. The production of vellum amounts to approximately 1,500 reams per day, of which 20 per cent is exported to Central and South America. This paper is reserved for all official documents and contracts. Cardboard made from rags and a fast-staining paper is also exported. The exportation of paper increased from 5,004 tons annually through the 1911-15 period to 12,678 tons in 1916. *Papel de paja*, a good imitation of the much-organized, promises a bright future for the industry.

THE GLASS, PORCELAIN, AND CERAMIC INDUSTRIES.

Industries devoted to the manufacture of glass, porcelain, earthenware and ceramics are scattered throughout the whole of Spain, although the provinces having the greatest number of factories are Valencia with 532, Barcelona with 436, Seville with 271, Madrid with 281, and Toledo with 254. Included in this production are fine white and coloured earthenware or porcelain, medium class and ordinary earthenware, glassware, decorative ceramic articles, e.g., vases and statuettes, glass coated with quick-setting, glass windows, tiles for paving, fine mosaics, small tiles, polished and common tiles, natural stone and engraved, stained and decorative glass.

Some of these products are peculiar to Spain; for example the fine decorative earthenware of Valencia, the earthenware of Talavera, and the polished tiles of Seville.

THE CHEMICAL INDUSTRIES.

In 1913 the total number of factories and laboratories in Spain for the manufacture of chemical products, was estimated at 2,761, the more important ones of products being at Barcelona, Gerona, Valencia, and Madrid. Among the leading manufactures may be mentioned those devoted to pharmaceutical and medicinal products (21), turpentine (31), sulphuric acid (10), oil of turpentine (23), orange and lemon extracts (13), varnishes (25), colours (21), printing inks (34), and tar (23). Other products produced are sulphur carbonate, white lead, alums, nitric acids, cream of tartar, and tartaric acid, ammonia, carbolic acid, carbonate of soda, vermilion, licorice extract, lakes, ivory black, etc.

The manufacture of essential oils is an important business at Malaga, Spain being the largest producer in the world of spike oil, rosemary, thyme, sage, and pennyroyal.

In connection with the refining of olive oil, a soap industry has grown up, turning out both crude and toilet soaps. Toilet preparations are made on a fairly large scale.

Nitrates and nitric acid are manufactured at Lerida, and 30,000 tons of carbonate of soda are turned out annually by the Solway process at Torrelaveja. Superphosphates to the amount of 110,000 tons are manufactured annually in Valencia, and the chemical fertilizer trade is very important, although foreign supplies are in demand.

A development is also taking place in the ink and varnish businesses, but Spain is not yet in a position to take care of the local market. The aniline dye industry is still in its beginnings.

The total capitalization invested under this heading is hardly more than 1,000,000 pesetas, and in spite of evidence of development Spain normally imports about 125,000,000 pesetas of chemicals every year. The exports represent some 35,000,000 pesetas.

THE SHIPBUILDING INDUSTRY.

In the former times of ocean-going wooden vessels, various parts of Spain developed a considerable shipbuilding industry, especially along the littoral of the Basque provinces. With the advent of iron and steel construction, however, Spanish iron deposits unexploited, was easily outdistanced by the northern countries, and it is only in recent years that the shipbuilding industry has been revived, although even now the number of shipyards which have sprung up along the Mediterranean and Atlantic coasts have been mostly for wooden ships necessitated by the urgency of setting war losses. The war in fact gave an appreciable impetus to this native industry, and at the end of 1917 the Spanish yards had orders for 100,000 gross tons, which was increased to 190,000 tons by the middle of 1918.

But Spain, given her national iron resources, the recent awakening to a sense of her industrial possibility, and with many yards already established, may be expected to develop gradually this most important industry. Even now the Sociedad Española de Construcción Naval, the largest Spanish shipbuilding concern, and one in which the Spanish Government is directly interested, has docks sufficiently large for the construction of vessels up to 15,000 tons, and is at present engaged on a shipbuilding programme which calls for three steamships of 12,000 tons each. This company has yards at Ferrol, Cartagena, Matagorda and Bilbao. English capital is also invested in Spanish shipbuilding, the companies of Vickers and Whitworth both being interested. Just recently it is reported that the well-known firm of Italian shipbuilders, the Ansaldo Company of Genoa—have decided to erect yards near Barcelona. The presence of foreign capital in this industry will in all probability have a stimulating effect on Spanish enterprise.

OTHER INDUSTRIES.

Electrical.—In the province of Barcelona, various electrical goods are turned out, e.g., transformers, dynamos, motors up to 200 horse-power, electro-technical apparatus, electric cables, electric lamps, carbons, and small electric material. Spain is still importer, however, of large amounts of electrical goods of all descriptions.

Furniture.—Modern furniture and copies of antique are reproduced in Madrid, Barcelona, Valencia, Bilbao, and Vittoria.

Automobiles.—In 1914, but seven per cent of the motor-cars used in Spain were of Spanish manufacture. In 1918, however, the percentage of home-constructed cars had increased to 30 per cent. The best-known Spanish car is the Hispano-Suiza, but by the company of that name, which has factories at Barcelona and in France. The firm has commenced the building of industrial chassis, 15 to 20 horse-power and 30 to 40 horse-power, and it is stated that already over 500 are in use throughout Spain. A 40 to 50 horse-power truck chassis of this company has been adopted as a standard model for the Spanish military authorities.

Gold and silver mesh purses.—The making of gold and silver mesh purses is a distinctive Spanish industry, being centred in the Balearic Islands. The separate

lamps are individually welded and the decorative hand carving and sawing give them a very artistic and beautiful finish. One of the largest factories was visited at Palmo de Majorca.

Hemp shoes.—Another industry peculiar to Spain is the making of hemp-soled shoes, which are worn extensively by the poorer people throughout the peninsula.

Condensed milk.—In addition to the sardine-canning industry, previously referred to under the heading of fisheries, there is a company in the north of Spain which cans condensed milk in the ordinary tall tins. Condensed milk is also put up in Santander in the usual size cans. Reference has already been made to the fruit and vegetable canning industry.

Fans.—The fan is in widespread use throughout Spain, and an important industry in Valencia exists for the production of ordinary and hand-painted fans. The best fans are artistically decorated with typical Spanish scenes.

Steel and gold jewellery.—Another characteristic Spanish production is the making of steel jewellery inset with gold and silver work. The best work is done by hand at Granada, Toledo, and Eibar, and the wide range of jewellery and fancy articles made find ready sale not among the Spanish, but by the tourists visiting that country.

Aircraft.—The Spanish aircraft industry is in an embryonic state at present, but it is proposed to construct machines for passenger transport, mail and commercial purposes. Already some motors and machines have been built, although the majority of the machines have been imported from France. There exists, moreover, a concession for a postal service between Barcelona and Madrid for the carrying of urgent correspondence, but the concessionnaire company is still in course of organization. There are two aviation grounds in Spain, one at Madrid and one at Barcelona.

HYDRO-ELECTRIC INDUSTRY.

The future of Spain's industrial activity is believed to be more or less connected with the hydro-electric developments of the country. There are claimed to be at least some 3,000,000 horse-power available, and with the construction of dams in certain districts, this amount it is stated might be increased to 5,000,000 horse-power. Up to the present it is stated that some 1,000,000 horse-power only are being utilized, the outlay of capital in this industry representing at present some 400,000,000 pesetas.

The chief districts characterized by their accessibility to this latent national wealth are Leon, Galicia, Asturias, Santander, the river Douro and its affluents, the rivers Tago, Guadiana, Guadalquivir, the Júcar, the Calor, and the river Ebro above Zaragoza and from this town to the sea.

PART IV.

The Spanish Markets.

AGRICULTURAL MACHINERY.

In considering the market for agricultural machinery in Spain, it is to be pointed out that its use up to the present is not generally adopted, and that any increasing demand entails primarily demonstrating and accommodation. In the first place the conservative spirit of the farmer tends to retain the old-fashioned method of ploughing, threshing and winnowing, as he usually fails to see why he should discard a known instrument or machine for the one unknown and unused by his ancestors. Oddly though it may seem, the writer saw throughout his travels in Spain, many ploughs at work of the old Egyptian and Moorish type—a mere piece of steel or iron with a wooden handle attached—while the method of threshing by the treading out

of animals, of water being by the wind, and of the sugar beet by the old Moorish method, which is not common throughout the peninsula. The ability of the modern farmer to overcome the prevalence of old time methods, must therefore be demonstrated.

Modernization is meant the suiting of machinery offered to the people to the different parts of the country, and secondly facilitating the terms of payment. It must be kept in mind that the Spanish farms are often not extensive, that the soil in some places is sandy, in others alluvial, that Spain is a country of the least draught animal, and that certain characteristic farming methods obtain. In cutting the wheat so that about 15 inches of stubble is left, which is usually employed, after burning, for fertilizing purposes. It was Germany above all other countries which recognized the indispensability of catering to the Spanish market when selling in Spain, and as illustrating this determination an example was pointed out to the writer of a German plough firm which for three successive years sent over a technical expert from the factory to study at first hand the particular needs of the Spanish farmers in ploughs. This work accomplished, he returned to Germany with complete information and it was not long till this German firm was doing a very big business in this particular article.

It was the German too who recognized more than others the necessity of granting the Spanish credit terms. He knew from his first hand investigations that the Spanish landowner or farmer was often not sufficiently strong financially to make payment in cash, but by means of the German bank operating in Spain, the farmer's requirements were met, and the exporting firms thus enabled to grant terms which would otherwise be denied. Sometimes it might be six months, and sometimes as long as a year, the case of heavy and expensive machinery, a period of from two to three years. The arrangement being usually as follows: one-third of the bill would be met on delivery, one-third at the end of the first harvest, and one third at the end of the second harvest. It was brought to the writer's attention that one American firm at least was making very favourable concessions. What may be termed then the advantage of modernization, whether in the machine itself or in the procedure of collecting cash, and not be overlooked in extending or opening up the sale of Canadian agricultural machinery in Spain.

Over and above all this there is to overcome the prejudice of the farmer, who believes, not unfrequently, that the employment of machinery will drive him from the fields and his livelihood. His natural aversion must be met by explaining what is the obvious, viz., that the use of machinery means more land cultivated, a more extensive harvest, a greater return to the landlord (or in case of peasant ownership to the farmer himself), and therefore better wages and better living conditions.

Notwithstanding the foregoing general survey, agricultural machinery is fairly known and utilized successfully in many parts of the country, and it is generally agreed that there is a considerable field for agricultural machinery trade development in Spain. In fact, that there is an increasing demand for it is evidenced by the action on the part of a few important Spanish companies, who have begun to manufacture home, copying for the most part foreign models which have been especially found to meet the needs of the country. (The chief difficulty, however, in strengthening home production at present seems to be the inability of the Spanish firms to turn out suitable malleable castings.) There is also the additional consideration to be taken into account by the Canadian exporter, that Spain, in solving her agrarian problem, will have of necessity greater recourse to the use of agricultural machinery.

The Spanish market so far has not been monopolized by any one country, nor is machinery from Canada new to Spain, as her harrows, cultivators, reapers and binders especially have successfully competed with other foreign marks. Besides Canadian companies, there are American, French, Swiss, Belgian, English, Australian and German houses which have done, or are doing, business, the bulk of the trade normally going to the United States and Germany.

THE PLOUGH.

As is to be expected, the most widely used agricultural machine is the plough and the types generally are in vogue:

(1) A light and cheap plough for the light and sandy soil of the central and northern provinces,

(2) An all-steel plough for the heavier and alluvial land of the southwestern districts.

Representative types are shown hereunder:—



This type of plough is the most common in the central and northern provinces, and is sold with either one or two handles and works to a depth of 20 centimetres.



This type of plough for general uses is sold with either one or two handles and works to a depth of 20 centimetres.



The heavy-duty plow, the most common type, is made of cast iron and weighs from 100 to 150 pounds. It is used for plowing the soil in the fields.

These plows are for the most part imported from the United States and made locally. The point is formed of hardened cast iron, and it is stated that the foreign point will last three times as long as the one made in the country. It is then, of course, no wonder to persuade the Spaniard that it is more economical to pay a higher price for the good point, the imported plough, than to buy the Spanish one, which will last only one or two years afterwards. The beams and handles of the American type are made of hickory. Prices range from 300 pesetas to 750 pesetas.

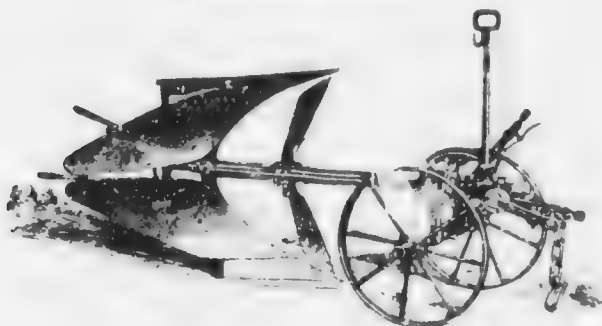
THE AGRICULTURAL PLOUGH



U. S. M. 23.

The Spanish type of the all-steel plough has been most common in the yards of the Germans, but it is not made in ploughs of any kind there. It is made in the south of France, and I saw it in the yards of the Germans at the end of the war. The machine was built for two horses, and could be used in the south of France. The lead wheel of this plough ranged from 60 to 75 centimetres, according to the size and make of the plough. The Spanish manufacturer of the all-steel ploughs is not known, and he is not as yet, and he is not in the market for the machine. The machine is the only one which had the most sale, and it is the only one.

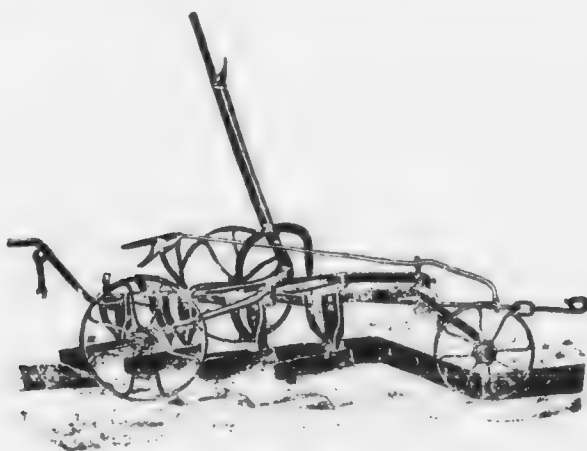
THE PLANTING PLUGH.



A small plough, which is known as the "plough" in Spain, is the "plough" in the French plough, the "plough". This machine, an illustration of which is seen above, has been used in Spain in five different sizes, weighing 120, 140, 180, 240, and 300 kilograms.

MULTIPLE SHARE PLOUGHS.

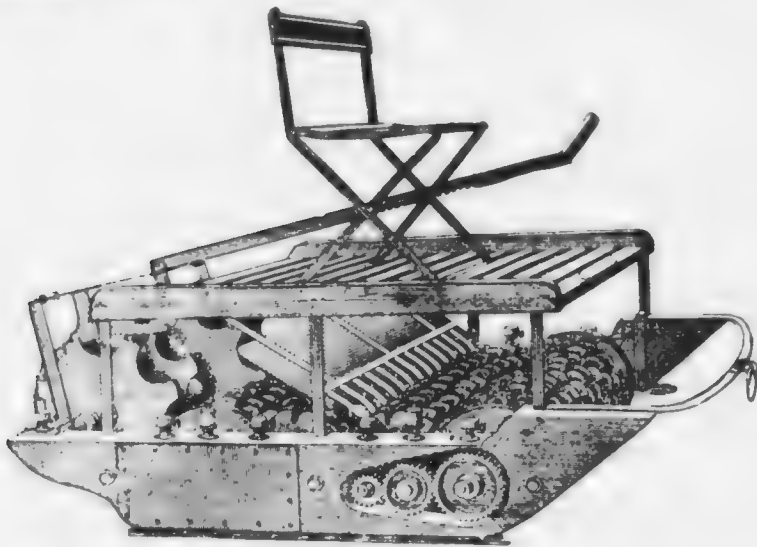
The heavier type of all-steel plough, with two, three and four shares, also meets with a limited sale in Spain, and is constructed for two, three or four horse traction. These ploughs weigh up to 173 kilogrammes and plough up to 80 centimetres in breadth, and 20 centimetres in depth. A four-share model is shown hereunder.



machines are not well adapted for the Spanish farmer, but he needs to be shown the advantages of the new method. Something more might be done in demonstration work in the large groups of farmers.

For some years before this, leading lines mostly from England and the United States, it is noticeable locally. Germany had not done any actual business in the field of the machinery of the war, although a specially constituted light thrasher had been especially designed for the Spanish market. Its appearance is now expected.

Even so, if any endeavour to sell thrashing machines, it is important to be prepared that the Spaniard not only wants a light, inexpensive machine, but also one which is sufficiently large that it will be suitable for ordinary work. It must be able to deal with straw, which is fed to the animals. A representative of the Spanish farmer's point of view is seen in the following



THEIR KINDS OF AGRICULTURAL MACHINERY.

What has been sold in Spain principally of United States and English origin. Bean and corn crushers also come from England, while a few are manufactured locally from French models. France does what trade there is in grain crushers, and Germany at one time in manure distributors. These latter are now being made in Spain. Forage cutting and grinding machinery are of American and English construction. Vine harvesters are imported from France, while grape-mills are made in Catalonia or obtained from England. Windmills were formerly imported from the United States, but are now being turned out at home, as also are winnowers, a considerable number being produced every year. Semi-diesel engines for agricultural work are not unknown in Spain, those in use coming mostly from England and the United States.

Up to the present there has been no pronounced demand for tractors, although during the war several arrived from the United States. What is wanted chiefly in this line is a machine of substantial construction and one economical in its working. It is to be remembered, however, that farming on a large scale is not common in Spain, that the price of gasoline is very high even in normal times, and that the roads are so numerous or good in central and southern Spain. All of these facts serve as arguments at the present time to any extensive trade in tractors. An oil-burning tractor is considered preferable in some quarters.

CONCLUSIONS AND RECOMMENDATIONS

If the Canadian hardware and machine tool industry is to succeed in the Spanish market, it must first of all be able to supply the Spanish agricultural machinery market. The Spanish agricultural machinery market is at present almost entirely supplied by the British, American, and German manufacturers. It is therefore necessary that the Canadian manufacturers should be able to supply the Spanish market with machinery of a type and quality which will be acceptable to the Spanish farmer.

RECOMMENDATIONS

The following recommendations are based on the results of the study made on the Canadian hardware and machine tool industry in Spain. It is hoped that they will attract the attention of the Canadian manufacturers at home.

1. *The Canadian hardware and machine tool industry should be able to supply the Spanish market.*—The return of the Canadian hardware and machine tool industry to this market is a matter of importance to the Canadian manufacturer. A study of the Spanish agricultural machinery market has shown that Canadian manufacturers need to improve their products in many respects. First of all, they should be able to supply the Spanish farmer with machinery of a type and quality which will be acceptable to the Spanish farmer. This is a matter of importance to the Canadian manufacturer. It is therefore necessary that the Canadian manufacturers should be able to supply the Spanish market with machinery of a type and quality which will be acceptable to the Spanish farmer.
2. *The Canadian hardware and machine tool industry should be able to supply the Spanish market.*—There is at present under discussion the establishment of an experimental farm near Madrid for testing British machinery. This, if done, will undoubtedly be an excellent opportunity for Canadian manufacturers, but should not preclude the more decentralized demonstration of Canadian machinery.
3. *Placing some distinctive mark on agricultural machinery might be done with advantage.* For example, a picture of the rising sun, a bull, a horse, a bee, a dog, could be used to distinguish different types of machinery, and the machinery thus would form a topic of conversation among even the illiterate peasant. It was suggested that some such device would have a telling effect, and is of far greater importance than the name of the manufacturing concern, though there is no objection to this, too, being added.
4. The word *Canada* should be prominently printed on all Canadian machinery.
5. Canadian manufacturers should *concede something more in the way of payment facilities.* To grant attractive and yet safe terms should not now be a difficulty with a Canadian bank established in Spain. Thirty days against receipt of documents is not the way to win trade in the Spanish agricultural machinery market when the outlay on the part of the importer demands a large sum, and yet a case was brought to the writer's attention of a Canadian firm attempting only recently business on this basis. The buying merchant, as a matter of fact, in this case was perhaps the largest agricultural machinery importer in Spain. To try to win any permanent trade in this way is to court failure.
6. *The more thorough the study made on the spot by our manufacturers of the types of machinery wanted and the trade customs prevailing, the more satisfying will be the results obtained.*

PUMPS.

One of the largest hardware and machine tool houses in Spain which operates branches at Barcelona and Madrid, told the writer that in their 1918 catalogue they omitted the offering of any centrifugal or rotary pumps as the only ones then obtainable.

and the high price being asked for Spanish construction, which they did not consider well adapted to permit the use of the greatest of the steel they were carrying, however, and some firms hesitantly held their market, and it was not until the second summer that a good business in these products could be done by Canadian firms, who were prepared to make a sacrifice for the trade. Both German duplex and duplex pumps were sold in Spain. In connection with irrigation and mining, considerable quantities of increasing demand for high-pressure apparatus of small or medium capacity.

In connection with the irrigation system, it is of interest to point out that one of the most important ways in which water is supplied consists in the sinking of wells, generally by heavy individual action, for the watering of truck gardens and small holdings. The existing mechanism is often the primitive draw well more or less improved, though the modern pump is growing favour throughout the irrigated districts of the country. Pumping machinery is also used in connection with the two important methods of Spanish irrigation, viz., the diverting of river water by canals, and the collection of water by embankments and reservoirs.

Motors are used for lifting water to the top stories of private houses and also for irrigation.

The hand pump business is mostly taken care of by American and Spanish agents, although there is a trade in the country and of poorer construction and a very primitive type. Some adaptation for agricultural purposes is desired to become much more general, and a favourable opening seems to present itself, especially as the Spanish Government is not very prompt.

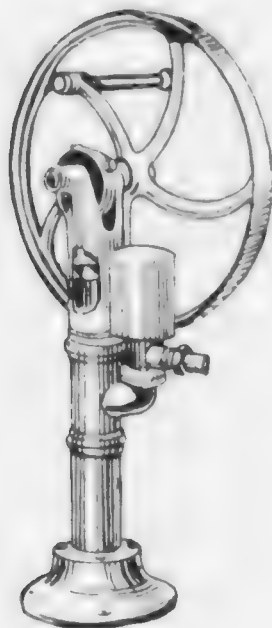
A few types of hand pumps in ordinary demand are shown hereunder:



Diameter of cylinder, mm.	51	57	63	69	76
Stroke of piston, mm.	127	152	152	152	152
Inside diameter of pipe, mm.	25	25	32	32	32
Litres per hour.	700	1,000	1,200	1,500	1,800
Approximate weight, kg.	10	11.5	12.5	15	16

Manufacturers of the more satisfactory

which operate catalogue they then obtain-



Diameter of cylinder, mm. 76

Stroke of piston, mm. 76

Capacity, ltr., 3000

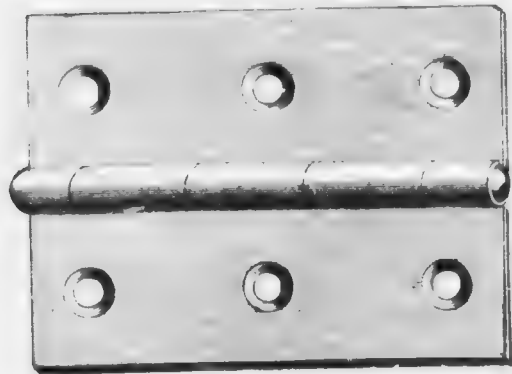
Weight of pump, mm. 300

Approximate weight, kg. 750

BUTTS, LINGS, STAPLES, ETC.

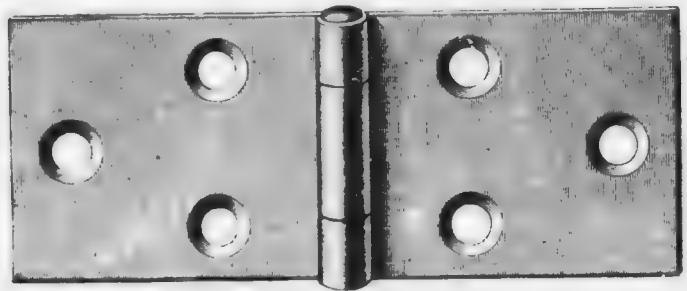
There is little in butts, lings, bolts, nuts, staples, etc., as yet the most detailed competition in the business goes back to German houses in the former lines, and to English, Swedish and American firms in the articles of better quality. The factory at Cordoba and Gijón has grown considerably during the war, and the inferior product turned out and principally because the German trade is not so plentiful at present and there should be a great deal of Canadian business to be done. The setting up of attractively labelled and well-known Spanish brands commends itself. The representative illustrations under this heading are shown hereunder:—

BUTTS.



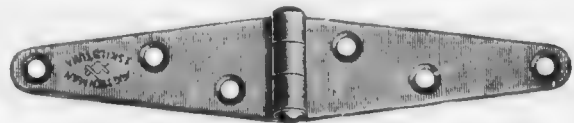
Length: 1-1/2-inch, 1-inch, 1-1/2-inch, 1-3/4-inch, 2-inch, 2-1/4-inch, 2-1/2-inch, 2-3/4-inch, 3-inch.
The one and three inch are the best sellers.

BACK FLAPS.



Length of joint: 1-inch, 1-1/2-inch, 1-3/4-inch, 1-1/2-inch, 1-3/4-inch, 1-1/2-inch, 1-3/4-inch, 2-inch, 2-1/4-inch, 2-1/2-inch, and 3-inch.

STRAP HINGES.



Length of each leaf: 3, 4, 5, 6, 7, 8, 9, 10, 12 inches.

LOCKS, CASTORS, FURNITURE, HARDWARE.

Germany did the bulk of the cheap lock trade, while the more expensive types manufactured at home. In padlocks the trade is normally divided between Germany, France and the United States. The prevailing sizes are 35, 45 and 55 mm in width. The castor trade has been mostly American, with German, French and Spanish competition. Furniture handles and key plates of showy design were sold principally in Germany at very low prices. Italy has also recently sent small quantities of German imitations.

SPANNERS, VICES, DRILLS, PLIERS, PLANE IRONS.

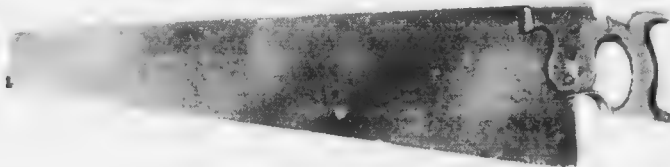
Germany gradually won the trade in spanners over French competition. The sizes mostly in demand are 15, 18, 20, 22, 25, 28, 30, 32, 36, 42, 45 centimetres long. Double-ended spanners 14 by 16 mm., and 22 by 25 mm., and 18 by 20 mm., are also sold. It was Germany, moreover, which did the largest business in braces and in parallel vices, the following dimensions for the latter being indicative of those sold: 80, 100, 120, 140 mm. in width.

In drills America has got in on the trade which prior to the war was practically German. The United States drill is considered of excellent quality, but a little high in price. Five and 10 mm. drills are among those most widely sold. The caliper trade normally is German, 20 centimetre calipers being one of the commonest types sold. Pruning shears (18-inch) and shoeing pliers (23 cm.) are nearly all of French origin, while Germany again in pre-war times had the trade in carpenters' pliers (22 cm.), combination pliers (18 cm.), and in forge nippers 5 inches and 6 inches. In plane irons (44 mm.) France virtually controls the market.

FILES AND SAWS.

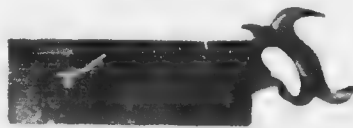
The German file, on account of its inferior quality, gave place to British goods, but of late this trade in a large measure has gone to the United States, as has also the business in saws. Sweden and France are also represented in the saw trade, and Germany also used to do business in hack-saws and pruning saws. It was stated that circular saws for veneer and iron and steel, planing saws, block saws, cross-cut saws, hand saws, back saws and lock saws, and band saws are all saleable. Given hereunder are some of the types found in the hardware stores of Spain:—

HAND SAW.



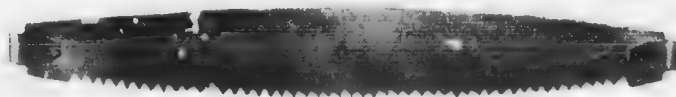
Lengths from 12 to 32 inches in grades of 2 inches.

BACK SAWS.



Length from 10 to 18 inches in grades of 2 inches.

CROSS-CUT SAWS.

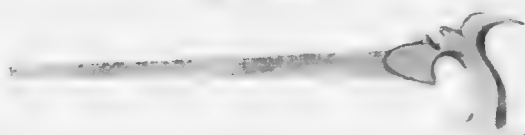


Length 4, 4½, 5, 5½, 6, 6½ feet.

2185-4

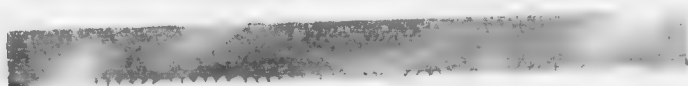
TRADING IN SPAIN

LOCK SAWS.



Lengths from 10 to 12 metres in grades of 2 metres.

BLOCK SAWS.



Thickness 2034, 2000, 1980, 1960, 1940, 1920 mm.
Width 100, 110, 125, 135, 150, 160 mm.

THE CUTLERY TRADE.

Again in the cutlery trade the Germans are better known and the bulk of the Spanish business, one firm alone in Germany, it was stated, getting 50 per cent of the total orders. In endeavouring to open up a trade in this line it is very necessary to cater to the Spanish taste. The Spaniard generally wants for table use a knife which has a curved blade and a nickel plated handle, and which is about 5 inches long. (The blade of a dessert knife is generally 4 inches long.) The blade also to sell among the better classes must be polished, although a roughly ground blade sells in other quarters. During the war Spain considerably developed her own cutlery industry and is now turning out products very similar to those formerly obtained in Germany, and at low quotations.

Kitchen knives have either a metal or a wooden handle, and their blades range from 4½ inches to 6 inches in length. France, Germany and Spain do the greater part of the business, although American kitchen knives can be seen in some stores. The tinned forks and spoons sold are either of Spanish, German or French manufacture.

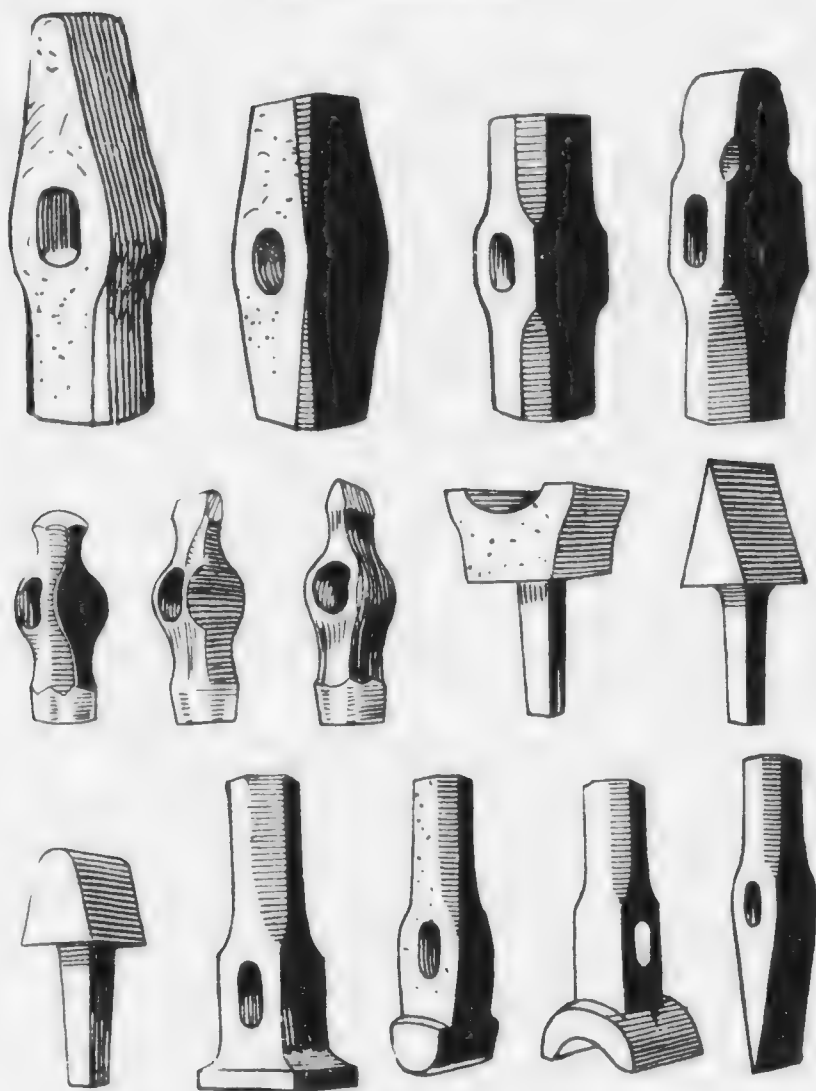
Pen knives and pocket knives are generally imported from Germany and are of the usual poor quality type. Scissors are made locally and imported from France and Germany. The writer saw one kind of scissors of Spanish make, which, if allowed to fall on the floor, would instantly break, and yet there has been a demand for this worthless kind of product. Recently French scissors of superior make have begun to arrive.

Notwithstanding what is said in the foregoing paragraphs, there is a limited demand for the better grades of cutlery, and English goods can be obtained at the best shops.

HAMMERS AND SHOVELS.

To get any important share of the trade in hammers now principally of Spanish and German origin, it is necessary to make the heads according to the pattern desired in Spain, some of which are seen hereunder. American shovels are now competing with those manufactured locally, and are offered for various kinds of uses.

TYPES OF HAMMER HEADS.



NAILS, SCREWS, BOLTS, ETC.

Now manufacturing in Spain is controlled by an important trust, and it would seem difficult for Canadian manufacturers to compete successfully. Screws, however, are made by German firms to Spanish dimensions, an example which has since been followed by United States companies. Ordinary bolts, nuts and rivets can be obtained in Spain with apparently entire satisfaction.

SUMMARY.

In summing up the hardware situation, it is worth while pointing out:—
 1. That this trade calls for both the very cheap and higher grade article, and that a market exists for both kinds of products. It would seem, however, that Canadian goods could only cater to this latter trade.

2. That the native production is of a fair quality, and because there is a strong demand for the inexpensive article, Spanish-made goods have been substituting the cheap German article.
3. That Germany will exert herself to win back her former position in this trade.
4. That the United States and France are the keenest foreign competitors at present.
5. That packages should be attractively and accurately put up, and that the label should be in Spanish.
6. That the personal visit first and the permanent representation afterwards, or else direct connections with the big wholesalers, seem necessary.
7. That advertising in Spanish is an appreciable asset.
8. That the trade must be seriously worked for.
9. That the usual German method of payments was ninety days, the discount depending upon the size of the order.

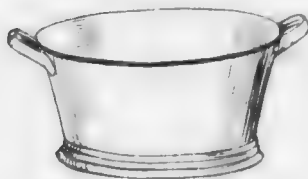
Provided Canadian manufacturers or exporters are prepared to cater to the Spanish hardware taste, even if it be only in the higher class articles, are willing to do business on the terms prevailing in the market and are ready personally to interest the Spaniard in what they have to sell, it is safe to predict that a substantial business can be eventually built up.

THE ENAMELLED WARE TRADE.

Austria had no monopoly of enamelled ware trade in Spain. Not only was German, French and Swiss competition appreciable, but two Spanish firms were also able to take care of some part of the home requirements, and since the war their business has considerably developed, even though the production is of an inferior quality. The consuming market, however, is stated to be relatively large, and a higher grade article, even if at a slightly elevated price, would undoubtedly, it was stated, find many buyers. From the inquiries made it would seem that Canadian firms would, and should, get a share of this trade.

The illustrations inserted show some of the more popular articles and types in demand.

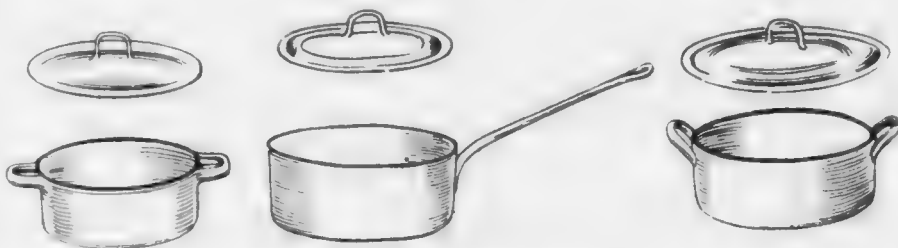
FOOT BATH TUBS.



Oval, 35-70 cm. in grades of 5 cm., made with or without feet, and with fixed or movable handles.

Round, 30-60 cm., in grades of 5 cm.

SAUCE PANS.



Sauce pans are sold generally in the following sizes:—

8 cm. for 1/5 litre.
14 cm. " 3/4 "
20 cm. " 2 "
26 cm. " 4 1/2 "
32 cm. " 8 "

10 cm. for 3/8 litre.
16 cm. " 1 "
22 cm. " 2 1/2 "
28 cm. " 6 "
34 cm. " 10 1/2 "

12 cm. for 1/2 litre.
18 cm. " 1 1/2 "
24 cm. " 3 1/2 "
30 cm. " 7 "
36 cm. " 12 1/2 "

POTS AND KETTLES.



The enamelled pots shown above in the first two rows, are sold in the following sizes:—

8 cm. for 1/2 litre.	7 cm. for 3/4 litre.	8 cm. for 1 litre
10 cm. " 1 1/2 "	12 cm. " 2 "	14 cm. " 2 1/2 "
16 cm. " 3 "	18 cm. " 3 1/2 "	

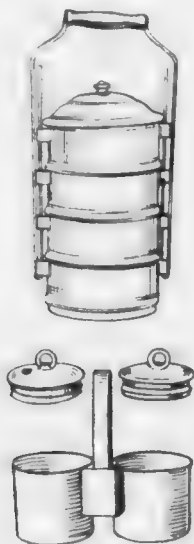
Those in the third row range from 10 cm. to 32 cm.

SPANISH DUST-PAN OR GARBAGE CAN.



The above illustration shows the peculiar type of dust-pan used generally in Spain, which is really a cross between the Canadian dust-pan and garbage can. It is sold in two sizes, 24 and 26 centimetres

DINNER PAILS.



The workmen have their dinners carried to them in receptacles as shown above. Out 29 may be of 2, 3, 4 or 5 compartments in sizes of 12, 14, 16 and 18 cm. Out 30 is sold in sizes of 10, 11, 12 and 14 cm.

TRADING IN SPAIN

CHOCOLATE POTS.



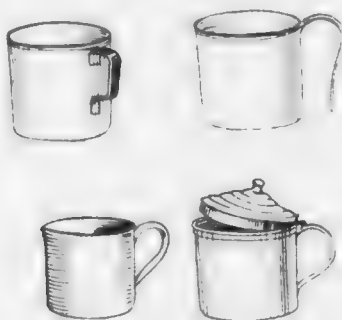
The above illustration shows the distinctive type of ordinary chocolate pots so often met with in Spain. The sizes are as follows:—

6 cm. for 1/4 litre
7 1/2 cm. " " 1/2
10 cm. " " 1 litre

6 1/2 cm. for 3/4 litre
8 cm. " 1

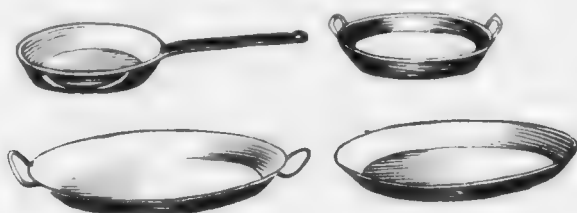
7 cm. for 1/2 litre
9 cm. " 1 1/4

CUPS.



Various types of cups sold in Spain in the following dimensions: 6, 7, 8, 9, 10, 11, 12, 14 and 16 cm.

FRYING PANS.



The foregoing cuts illustrate different kinds of frying pans in ordinary use. The round are sold in 12, 14, 18, 24 and 28 cm., the oval are sold in 26 cm.

CASSEROLES



The above shown casseroles are offered in the following sizes:—

8 cm. for $\frac{1}{5}$ litre.	10 cm. for $\frac{3}{8}$ litre	12 cm. for $\frac{5}{8}$ litre
14 cm. " 1 "	16 cm. " $1\frac{1}{2}$ "	18 cm. " 2 "
20 cm. " $2\frac{3}{4}$ "	22 cm. " $3\frac{3}{4}$ "	24 cm. " $4\frac{1}{2}$ "

Another type of casserole commonly seen is the one shown immediately hereunder, measuring 16, 18, 20, 22, 24, 26, 28, 30 and 32 cm.



OTHER ENAMELLED ARTICLES.

In addition to the foregoing there are many other commonly used enamelled articles such as,—

- Soap cups, 10 and 12 cm., perforated and solid.
- Washbasins, 12 to 50 cm., some of which are made with stop-hole in bottom.
- Conical slop pails, 16 to 34 cm.
- Cylindrical slop pails, 20 to 26 cm.
- Bath-room pitchers, in sizes of 18, 20, 21 and 23 cm., holding 4, 5, 6 and 8 litres, respectively.
- Commodore and bedpans.
- Candlesticks, 11 cm.
- Spitoons, high round 20 cm.; low round 20 cm.; rectangular 24 cm.
- Cup strainers, 12, 14, 16, 18, and 20 cm.
- Tea strainers, 9 cm.
- Long spoon strainers, 7, 8, 9, 10, 11, 12, 13, and 14 cm.
- Basin strainers, 18, 20, 22, 24, 26, 28, and 30 cm.
- Graters, 18, 20, and 22 cm.
- Steaming kettles, 14, 16, 18, and 20 cm.
- Long kettles for cooking fish, 30, 35, 40, 45, and 50 cm.
- Coffee pots for holding $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, and 3 litres.
- Milk pitchers, with covers for $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, and 3 litres.
- Milk cans, 8, 10, 12, 14, 16, 18, and 20 cm.
- Bowls, 10, 11, 12, 13, and 14 cm.
- Conical and spherical funnels, 8, 10, 12, 14, and 16 cm.
- Soup dishes, 18, 20, 22, and 24 cm.
- Vegetable dishes, 18, 20, 22, and 24 cm.

Pots, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, and 36 cm.;
 deep, 6, 8, 10, 12, 14, 16, 18, and 20 cm.
 Cups, 7, 8, 9, and 10 cm.
 Teapots, 12, 14, 16, and 18 cm.
 Sugar bowls, 12 and 14 cm.
 Teacups, 14, 16, 18, 20, 22, and 24 cm.
 Electric light and gas reflectors.
 Laboratory and photographic apparatus.

White is the predominating colour, although dark blue, red, green, pink, and light blue enamelled articles are seen, as are also the mottled coloured products, with white enamel used on the inside.

A complete range of Canadian samples should be shown to the trade by a home representative if possible, who can speak Spanish. Business is to be had, but it will come to the most energetic and accommodating.

It is of interest to note that cast-iron hollow-ware has hardly any sale in Spain, and the ordinary charcoal stove which is used allows only thin pots and pans. Fancy ware is imported at present mostly from France.

MACHINE TOOLS.

The pre-war conditions of the machine tool market have considerably changed, and with the introduction of a new factor, viz., the Spanish product itself. Unable to draw supplies, as formerly, from overseas markets, and with many orders to execute for the Allied armies, in which machine tools were absolutely necessary, the Spaniard began to copy English and American models, and as a result there have sprung up a score or so of companies which devote themselves to this work, turning out small planing machines, small milling and shaping machines, and various types of lathes. But the Spaniard may hardly be considered as a permanently strong competitor in these lines, for the reason that his production is of a very poor finish, his construction often not accurate, and the cost of manufacturing high.

Germany had made a strong bid for the machine tool trade of Spain and had succeeded by solicitation and perseverance in securing a large part of the trade that at one time belonged to Great Britain. Not only was the German salesman more active, but it was pointed out to the writer that the British machine was often too enduring, too heavy and too expensive. The phrase used by one large importing house was that "the English machine would never wear out," and valuable though this quality might seem, yet with the constant improvements taking place in machine tool manufacturing, the Spaniard often preferred to scrap the old and buy the most up-to-date model. It is in this respect that the United States article has especially satisfied the Spanish market inasmuch as the latest improved designs have been offered, and at a lower price than the longer-enduring though more antiquated British machine. In fact the Americans have been very active of late in pushing their machine tools, with the result that the market at present is considered by some buyers to be overstocked. However, there is an evident determination to make Spain a greater industrial nation, and this achievement will entail more extended importations, and it is in this market of a larger demand that Canada's opportunity seems to lie. The Canadian machine tool with its excellent construction, its most recent improvements and its superior finish, would undoubtedly appeal if only an effort was made to get a part of this trade. The competition to be met will be German, English, American, and in some lighter and cheaper lines, French, but provided Canadian manufacturers can quote comparative prices at least equal Spanish port and will stock Canadian machine tools, there would seem to be an opening for the Canadian product.

SPECIFICATION OF MACHINE TOOLS.

The following general specifications of some of the more important machine tools were given the writer by a large firm of importers at Barcelona.

Vertical Drilling Machines	Height of Centres
For Drilling up to a Diameter of	Millimetres.
20	100
25	200
30	300
35	400
40	500
45	600
50	700
55	800
60	900
65	1,000
70	1,100
75	1,200
80	1,300
85	1,400
90	1,500
95	1,600
100	1,700
105	1,800
110	1,900
115	2,000
120	2,100
125	2,200
130	2,300
135	2,400
140	2,500
145	2,600
150	2,700
155	2,800
160	2,900
165	3,000
170	3,100
175	3,200
180	3,300
185	3,400
190	3,500
195	3,600
200	3,700
205	3,800
210	3,900
215	4,000
220	4,100
225	4,200
230	4,300
235	4,400
240	4,500
245	4,600
250	4,700
255	4,800
260	4,900
265	5,000
270	5,100
275	5,200
280	5,300
285	5,400
290	5,500
295	5,600
300	5,700
305	5,800
310	5,900
315	6,000
320	6,100
325	6,200
330	6,300
335	6,400
340	6,500
345	6,600
350	6,700
355	6,800
360	6,900
365	7,000
370	7,100
375	7,200
380	7,300
385	7,400
390	7,500
395	7,600
400	7,700
405	7,800
410	7,900
415	8,000
420	8,100
425	8,200
430	8,300
435	8,400
440	8,500
445	8,600
450	8,700
455	8,800
460	8,900
465	9,000
470	9,100
475	9,200
480	9,300
485	9,400
490	9,500
495	9,600
500	9,700
505	9,800
510	9,900
515	10,000
520	10,100
525	10,200
530	10,300
535	10,400
540	10,500
545	10,600
550	10,700
555	10,800
560	10,900
565	11,000
570	11,100
575	11,200
580	11,300
585	11,400
590	11,500
595	11,600
600	11,700
605	11,800
610	11,900
615	12,000
620	12,100
625	12,200
630	12,300
635	12,400
640	12,500
645	12,600
650	12,700
655	12,800
660	12,900
665	13,000
670	13,100
675	13,200
680	13,300
685	13,400
690	13,500
695	13,600
700	13,700
705	13,800
710	13,900
715	14,000
720	14,100
725	14,200
730	14,300
735	14,400
740	14,500
745	14,600
750	14,700
755	14,800
760	14,900
765	15,000
770	15,100
775	15,200
780	15,300
785	15,400
790	15,500
795	15,600
800	15,700
805	15,800
810	15,900
815	16,000
820	16,100
825	16,200
830	16,300
835	16,400
840	16,500
845	16,600
850	16,700
855	16,800
860	16,900
865	17,000
870	17,100
875	17,200
880	17,300
885	17,400
890	17,500
895	17,600
900	17,700
905	17,800
910	17,900
915	18,000
920	18,100
925	18,200
930	18,300
935	18,400
940	18,500
945	18,600
950	18,700
955	18,800
960	18,900
965	19,000
970	19,100
975	19,200
980	19,300
985	19,400
990	19,500
995	19,600
1000	19,700
1005	19,800
1010	19,900
1015	20,000
1020	20,100
1025	20,200
1030	20,300
1035	20,400
1040	20,500
1045	20,600
1050	20,700
1055	20,800
1060	20,900
1065	21,000
1070	21,100
1075	21,200
1080	21,300
1085	21,400
1090	21,500
1095	21,600
1100	21,700
1105	21,800
1110	21,900
1115	22,000
1120	22,100
1125	22,200
1130	22,300
1135	22,400
1140	22,500
1145	22,600
1150	22,700
1155	22,800
1160	22,900
1165	23,000
1170	23,100
1175	23,200
1180	23,300
1185	23,400
1190	23,500
1195	23,600
1200	23,700
1205	23,800
1210	23,900
1215	24,000
1220	24,100
1225	24,200
1230	24,300
1235	24,400
1240	24,500
1245	24,600
1250	24,700
1255	24,800
1260	24,900
1265	25,000
1270	25,100
1275	25,200
1280	25,300
1285	25,400
1290	25,500
1295	25,600
1300	25,700
1305	25,800
1310	25,900
1315	26,000
1320	26,100
1325	26,200
1330	26,300
1335	26,400
1340	26,500
1345	26,600
1350	26,700
1355	26,800
1360	26,900
1365	27,000
1370	27,100
1375	27,200
1380	27,300
1385	27,400
1390	27,500
1395	27,600
1400	27,700
1405	27,800
1410	27,900
1415	28,000
1420	28,100
1425	28,200
1430	28,300
1435	28,400
1440	28,500
1445	28,600
1450	28,700
1455	28,800
1460	28,900
1465	29,000
1470	29,100
1475	29,200
1480	29,300
1485	29,400
1490	29,500
1495	29,600
1500	29,700
1505	29,800
1510	29,900
1515	30,000
1520	30,100
1525	30,200
1530	30,300
1535	30,400
1540	30,500
1545	30,600
1550	30,700
1555	30,800
1560	30,900
1565	31,000
1570	31,100
1575	31,200
1580	31,300
1585	31,400
1590	31,500
1595	31,600
1600	31,700
1605	31,800
1610	31,900
1615	32,000
1620	32,100
1625	32,200
1630	32,300
1635	32,400
1640	32,500
1645	32,600
1650	32,700
1655	32,800
1660	32,900
1665	33,000
1670	33,100
1675	33,200
1680	33,300
1685	33,400
1690	33,500
1695	33,600
1700	33,700
1705	33,800
1710	33,900
1715	34,000
1720	34,100
1725	34,200
1730	34,300
1735	34,400
1740	34,500
1745	34,600
1750	34,700
1755	34,800
1760	34,900
1765	35,000
1770	35,100
1775	35,200
1780	35,300
1785	35,400
1790	35,500
1795	35,600
1800	35,700
1805	35,800
1810	35,900
1815	36,000
1820	36,100
1825	36,200
1830	36,300
1835	36,400
1840	36,500
1845	36,600
1850	36,700
1855	36,800
1860	36,900
1865	37,000
1870	37,100
1875	37,200
1880	37,300
1885	37,400
1890	37,500
1895	37,600
1900	37,700
1905	37,800
1910	37,900
1915	38,000
1920	38,100
1925	38,200
1930	38,300
1935	38,400
1940	38,500
1945	38,600
1950	38,700
1955	38,800
1960	38,900
1965	39,000
1970	39,100
1975	39,200
1980	39,300
1985	39,400
1990	39,500
1995	39,600
2000	39,700
2005	39,800
2010	39,900
2015	40,000
2020	40,100
2025	40,200
2030	40,300
2035	40,400
2040	40,500
2045	40,600
2050	40,700
2055	40,800
2060	40,900
2065	41,000
2070	41,100
2075	41,200
2080	41,300
2085	41,400
2090	41,500
2095	41,600
2100	41,700
2105	41,800
2110	41,900
2115	42,000
2120	42,100
2125	42,200
2130	42,300
2135	42,400
2140	42,500
2145	42,600
2150	42,700
2155	42,800
2160	42,900
2165	43,000
2170	43,100
2175	43,200
2180	43,300
2185	43,400
2190	43,500
2195	43,600
2200	43,700
2205	43,800
2210	43,900
2215	44,000
2220	44,100
2225	44,200
2230	44,300
2235	44,400
2240	44,500
2245	44,600
2250	44,700
2255	44,800
2260	44,900
2265	45,000
2270	45,100
2275	45,200
2280	45,300
2285	45,400
2290	45,500
2295	45,600
2300	45,700
2305	45,800
2310	45,900
2315	46,000
2320	46,100
2325	46,200
2330	46,300
2335	46,400
2340	46,500
2345	46,600
2350	46,700
2355	46,800
2360	46,900
2365	47,000
2370	47,100
2375	47,200
2380	47,300
2385	47,400
2390	47,500
2395	47,600
2400	47,700
2405	47,800
2410	47

1913. In 1913 Spain imported approximately 11,000 tons of wrought iron and steel, the largest, solid drawn or lap-welded, and as at 1910 tons of pipes and tubes, the principal countries for importing being Germany, Belgium, France, and the United States, in the order named.

Great Britain at one time practically enjoyed a monopoly of the trade in the ordinary W. 1 screwed and socketed black and galvanized tubing, but gradually lost it to Germany, whose manufacturers always quoted in the metric system and in tonnes or pesetas. United States firms have also entered the market and have built up a substantial business. Spanish competition, although it exists in lap-welded and butt-welded tubing up to about 5-inch diameter, need not be a discouraging factor to the foreign exporter, as the national capacity of production is so small, and the article manufactured as a rule inferior in quality. The weldless steel tube trade has been almost altogether in the hands of the Germans, who have supplied a good quality article at a much lower price than that offered by other countries. There is a not unimportant demand for both the lap-welded and weldless tubing, and Canadian manufacturers would undoubtedly secure a much larger part of the business, if delivery could be advantageously effected, and shipments sent directly from Canadian port, rather than via New York. In fact, the importing house previously referred to stated that although it had handled Canadian tubing, the name of the Canadian manufacturer was not made known by the New York merchant firm, which invoiced the order. Such methods are extremely unfortunate and highly disadvantageous to permanent Canadian export business.

With regard to cast-iron pipes for Spanish waterworks, the trade is carried on principally by those countries which have waterworks concessions or properties in Spain, viz., Great Britain, France and Belgium, the first named sending a more solidly constructed pipe than the lighter Belgian and French manufacturer. Germany has not made any appreciable bid for this trade, but the United States during the war showed signs of activity, and has been doing its initial business.

Malleable, and not wrought iron, screwed fittings are asked for, the latter being considered too heavy. Germany, the United States, Switzerland and Spain have the trade in this line.

STEAM AND WATER VALVES.

Steam and water valves of iron were imported from Germany to Spanish specifications, and are also manufactured locally. Bronze valves and fittings are made locally, and imported from the United States. The following specifications illustrate the principal types being sold:—

IRON VALVES.

Passage Millimetres.	Diameter of the Flange. Millimetres.	Distance from Flange to Flange Millimetres
10	80	80
15	80	85
20	95	110
25	110	120
30	120	135
35	135	140
40	140	150
45	145	160
50	155	165
60	175	200
70	185	232
80	200	248
90	215	275
100	230	293
110	245	320
120	260	340
130	275	360
140	285	380
150	290	400
160	300	420
175	320	450
200	350	500

BRONZE VALVES.

The specialities of the bronze valves are as follows:

Millimetres.	Inches.	Millimetres.	Inches.
6	4	70	2 3/4
10	4	6	2 1/4
14	5	70	2 3/4
20	4	80	3
24	1	90	3 1/4
25	1 1/4	100	4
42	1 1/2		

Solid drawn copper tubes up to 3 inch inside diameter are manufactured in Spain, as are also solid drawn brass tubes. The demand, however, is considerably greater than the native supply.

WOOD-WORKING MACHINERY.

The trade in wood-working machinery was at one time done to a large extent by German houses, while the United States are now active in this field. It is reported that business is continually offering, and some of the machinery in constant request was specified to be as follows:

Horizontal bandsaws with wheels and frame—diameters of 700, 800, 900, 1,000 and 1,100 millimetres.

Planing machines—1,600 by 350 and 1,600 by 400 millimetres.

Moulding machines—800 by 720 millimetres; shafting, 40 and 50 millimetres diameter, with tools.

Horizontal mortising machines, with arrangement for squaring and for holes up to 30 millimetres.

Brazing apparatus up to 50, 60, 80 millimetres width.

Apparatus for filing bandsaws up to 50, 60, 80 millimetres breadth.

Circular-saw machines with attachments.

ENGINES.

The writer was informed that opportunities existed for the introduction of Canadian gas-engines, provided prices and terms were made competitive. This field was intensively exploited by the Germans, especially in the larger make of engine, but English, Italian, Swiss, Belgian and Swedish engines can also be noted throughout various parts of Spain. The German engine was as a rule cheaper than the English product, generally not so heavy, and finished off in an attractive style, while the Germans were also prepared to manufacture the engine according to the standards desired by the Spanish buyer, and to concede favourable sale terms.

The use of gas-engines in connection with irrigation and those activities where pumping machinery is employed will, it was stated, continue in all probability to be popular, especially in those parts where electrical development has not commenced, or is unlikely to take place. One serious drawback, however, to the wider application of the gas-engine is the high price of refined oils in Spain.

The writer also received inquiries for auxiliary engines to be used on trawlers, small cargo boats and wooden fishing craft. These are manufactured on a small scale locally, but the demand would seem to be greater than the present supply.

TURBINES.

About nine-tenths of the Spanish trade in steam turbines has been handled by German and Swiss houses. The English steam turbine is also favourably known in Spain. Canadian success in this line would largely depend upon price and representation. The water turbines existing in Spain at present are mostly of Swiss origin.

ROLLING STOCK AND RAILWAY MATERIAL.

Germany had succeeded during pre-war days in so manipulating the Spanish locomotive market that practically the bulk of the orders, especially in connection with the most important railways, came her way, and this she did in spite of Belgian, French and English competition. In the first place Germany was always willing to construct the engine to the detailed specifications and likings of the Spanish company, and in the second place her prices were lower in Spain than those of her competitors, even if higher at home and in less competitive markets for a similar engine. The German representatives for getting this business were technical men, speaking the native language of the French—as the French are financially and directly interested in the big trade in Spain—and who being able, in addition, to show drawn specifications and findings of their own tests, ingratiated themselves and pocketed the order. On the secondary lines, however, where the English, Belgian and French locomotives are not uncommon, even if they bear older dates. The tendency also here was toward the eliminating of other competitors. With the outbreak of war, the German business was of course suspended, and the United States began to bid with success, in a less keenly-contested market, and already American locomotives are seen running on the main lines.

The locomotive supplied to the Spanish railways by Germany, and the type predominating in Spain, is the steam superheater (Schmit system). The steam pipes are usually of iron and made locally. The most common form of brake is the vacuum.

Native Spanish timber is used to a large extent in the manufacture of railway wagon bodies, which with the frames are constructed locally to no small extent. To supplement the home production, German, French and Belgian cars were also sent to Spain, particularly those made in Germany and Belgium, and since the war the United States has obtained several important orders.

The well-known metallurgical firm, the Altos Hornos of Vizcaya, which belongs to the International Steel Rail Syndicate, not only take care of the major rail requirements of the Spanish roads, but in normal times exported rails to Central and South American countries. The type of rail used on the newer lines of the broad gauge railroads is 40 to 45 kilogrammes per metre, and on the older lines 30 to 35 kilogrammes. The narrow gauge railways use rails of about 20 and 22 to 22 kilogrammes on the new and old lines respectively. The import trade in rails is centred in the lighter product for the mines, but these also are largely supplied at home.

From Germany and Belgium principally came tires, wheels, axles, and springs, with shipments latterly from the United States. Wheel centres for locomotives were generally imported from Germany, and connecting rods are also most often of foreign origin. Other railway material which Spain finds necessary to purchase abroad are buffers, cylinders, copper fire-boxes and general steel accessories, as the home supply is outstripped by the demand. Fish plates, tie-rods, sole plates and dog-spikes are generally manufactured locally.

With regard to electrical tramways, these are practically in the hands of the Belgians who operate the services in the principal Spanish centres, except at Seville, where the firm is German, and in Valencia, Vigo, Valladolid and Coruna, where Spanish companies control. Electric tramways are either made in the country or imported from Germany, which has financial interests in the foreign companies operating the different lines. Some few American cars have also been imported. The rails for the electric service, as well as the wheels and axles, are either manufactured in Spain or imported from Belgium and Germany.

In view of the fact that much of the present rolling stock in Spain is dilapidated, and in view of many schemes now on the tapis for improving the present railway systems and for the development of new lines, it seems worth while for Canadian plants to keep themselves posted with possible and probable openings in Spain. Representation on the spot could be recommended provided proper shipping facilities would allow Canadian competition. The many projects for the electrification of railway lines should also be carefully watched.

THE IRON AND STEEL TRADES.

In outlining the Spanish industries, reference was made to the important iron and steel trade which has developed in Spain. Not only is pig iron produced, but ingots, blooms, billets, iron and steel castings, engineering castings, angles, bars, rods, shapes and sections; and in consideration of the inherent strength of the native industry, its accessibility to iron ore deposits, and the favourable quality of products turned out, it hardly seems that there is any scope at present for Canadian export trade in these lines. In special tool steel, however, the Canadian product might advantageously be made more widely known, especially as Canadian trade marks are competing with Sheffield steel in other foreign countries.

STRUCTURAL STEEL AND SHEETS.

Structural steel for bridges, etc., is fabricated in Spain, although it may happen that the projected railway and other engineering developments, if and when realized, will not be adequately met from native sources. The home production of thin sheet iron and galvanized sheet iron is virtually sufficient for domestic requirements. Tinned plates on the other hand are at present greatly in demand, although formerly about two-thirds of the Spanish need was met by native industry.

WIRE PRODUCTS.

Commercial iron rods for wire drawing were before the war, mostly of Belgian origin, but since hostilities the native product has been utilized. There are about ten important firms in Spain drawing wire, seven manufacturing nails, three making wire netting and cloth, five turning out barbed wire, and two producing spring wire. Fine steel wire for spring manufacture has been imported from the United States and Germany, and is not made locally to any extent. German and English plants supplied Spain with her card wire, and orders have also been placed in the United States. The wire rope used so extensively in the mines and for other purposes, has been imported almost exclusively, the countries of origin being Great Britain, Germany, France, Belgium and the United States, Germany and Belgium specializing in a flat wire rope for winding. In endeavouring to capture any wire trade which might be offering, it is of vital importance that quotations be given, as by the Germans, according to the metric system.

MINING MACHINERY AND SUPPLIES.

In view of the importance of the mining industry in Spain, and its continual requirements, it seems reasonable to predict that given direct shipping connections and determined and intelligent endeavour on the part of Canadian firms engaged in manufacturing mining machinery or mining supplies, there should be a Canadian opportunity, especially as a very large portion of the material has to be imported. English interests are to the fore in Spanish mining, and the conscious or unconscious British sentiment for British goods should to some extent tell in Canada's favour. Air compressors and rock-drills are largely imported from the United States, which has carried on an extensive advertising campaign in mining supplies.

Excavating machinery is supplied by both Great Britain and the United States. Germany normally had a good lead in crushing machinery, in portable railway material, while in mine wagons a French firm did the leading business. Great Britain also competing. Steam and electric winders were supplied almost exclusively by English houses.

The development of the coal-mining industry in Spain has demanded, and will it is stated continue to call for, all kinds of coal-mining accessories.

TIN-CANNING MACHINERY.

The writer was informed that some Canadian trade might be had in canning machinery owing to the growing importance of the Spanish tinned goods industry. The various machines required are often copied locally from English and French models, so that laid down cost and modern improvements would probably be the determining factors in any Canadian introduction.

CODFISH IN SPAIN.

Though an imported product, codfish may be looked upon as one of the national dishes of Spain. It is eaten in all parts of the country by peasants and well-to-do classes alike, although naturally its consumption is greater among the former. In the province of Alicante, the Newfoundland cod, when not too thin, is often cut into small pieces resembling caramel drops, and eaten raw.

It is important to keep in mind that the different localities of Spain have a distinct preference for different types of codfish. For example in the Catalan provinces, of which Barcelona is representative, the Norway cod, so cured as to present a white appearance, and showing considerable salt on its surface, is preferred. On the other hand in Bilbao, which is characteristic of northern Spain, the Iceland and Scotch cured cod, i.e. a cod showing less salt on its surface but presenting a white appearance, finds favour, while in southern and southeast Spain the Newfoundland cured cod of rather yellow appearance has found up till now the largest market.

The codfish imported into Spain is classified according to size as follows—

- (a) "tomcods" from 7 inches to 12 inches,
- (b) "small" from 12 inches to 16 inches,
- (c) "large small" from 17 inches to 20 inches,
- (d) "medium" from 20 inches to 23 inches,
- (e) "large" from 23 inches upwards;

but any shipment should include not less than 25 per cent under 14 inches. Naturally the largest fish are most popular, especially in the Valencia district, although "medium," "large small" and "small" grades, as in Alicante, command a good sale. A medium-sized cod weighs approximately 1 kilogramme.

According to quality and appearance, codfish are classified in Spain as Superior, Prime and Ordinary.

The writer was informed that Spain wants a codfish neither too thick nor too thin. In some parts of the peninsula, as at Bilbao, a relatively thin fish, resembling the Scotch ling, which when cooked becomes dilated because of the presence of gelatine, is popular, but on the other hand at Valencia a thick fish finds a readier sale. Generally speaking, however, cod of fairly good thickness is preferred throughout Spain.

In addition to the foregoing, it should be borne in mind that Spain wants well split cod, i.e. split down to the crown. Moreover, a clean nape is essential, especially for the Barcelona district, and the fish must present a clean appearance. A criticism made of Canadian cod by perhaps the largest codfish house in Spain, was that the Canadian fish often showed a dirty appearance on arrival, and looked as if it had been artificially dried. Much importance was also attached to the necessity of carefully grading the fish on the other side. Frequently the consignee had to cull the fish on arrival, whereas this work more properly belonged to the shipper.

Cod arrives in Spain during the September to May season, and generally comes forward loose or in casks of about four quintals, or packed in jute bales of 50 kilogrammes. If in this last way, the fish are securely fastened to each other, and the fish bundle so made as just to fit the bale. By this method the cod does not become broken or twisted, and the original straight appearance is preserved.

When the fish arrives at a distributing centre such as Alicante, it is shipped out in bales of one quintal to the various consuming centres with a seal attached to each bale.

Newfoundland has captured a very important share of the codfish trade of Spain, and during the last two years it was stated that about 50 per cent of the total importations came from that source. With the return of more normal conditions in shipping, however, it is expected that the Scandinavian, Scotch and Icelandic fish will render the competition in the Spanish market much keener.

Canada has exported relatively small quantities of cod to Spain, which according to Canadian Government trade returns were as follows: 1912, 816 cwt.; 1913, 2,545 cwt.; 1914, 468 cwt.; 1915, nil; 1916, 736 cwt.; 1917, nil; and 1918, nil.

In view of the steady and large consumption of codfish in Spain, however, an effort should be made to increase Canadian exports. In 1913 the total quantity of fish imported into Spain amounted to 54,749 tons, valued at 41,609,555 pesetas.

MARKETING SYSTEM.

The preferable way of marketing codfish in Spain was stated by a very large exporting house to be the making of shipments on consignment basis without a stipulated price, and as the cod was sold at the market prices prevailing, to remit payment. Of course such a system involves absolute confidence on the part of the shipper in the consignee, but provided such is had, the system was stated to be the best. Otherwise it had often happened that if the cod was bought at such and such a price in the country of origin and sold prior to arrival in the Spanish market at such and such a price, according to the basis of purchase, and if in the meanwhile (i.e., between the time of purchase and the time of arrival) prices fell, the Spanish buyer not infrequently found some way of protesting against the purchase and claiming, e.g., that the fish were in a damaged condition, and refusing on this alleged ground to take up the shipment. If on the other hand the parcels were sold at the market prices on arrival, as the market warranted their sale, no such occasion of protest could take place.

A well-organized agency acting in those centres from which it is proposed to distribute the fish, seems almost indispensable for any successful Canadian business. The writer's preliminary investigations would seem to indicate that Bilbao, Barcelona, Alicante, or Malaga are the most favourable ports for distribution.

THE LUMBER MARKET.

Even in pre-war years Spain was unable to adequately care for her lumber requirements, and importation was necessitated. The principal kinds of wood imported were larch-pine, red pine, white pine, birch, ash, poplar, white oak, beech, walnut, and mahogany, and the leading supplying countries included Scandinavia, Russia, Austria, Hungary and the United States. Owing to the appreciable shipping difficulties connected with the importing of foreign woods during the war, outside supplies were curtailed and increasing quantities of peninsular timber had to be cut. The return to more normal conditions, however, in transportation facilities is destined to see considerable sales effected of foreign lumber, and several of the most important lumber houses interviewed stated their willingness and desire to deal directly with Canada.

Lumber has not been so extensively used in house construction in Spain as in Canada, due to the fact that the buildings are always constructed of brick, stone or cement, and often with tiled floors and cement roofs. In a great many Spanish houses of the older type, not only floors but baseboards and wainscottings are of artistic tiling, and even the doors and window frames are sometimes of metal. The lumber required, therefore, has been chiefly beams and wood for the larger purposes, although in the newer constructions wood is being more extensively used for finishings. There is at present a great scarcity of apartments—the mass of the people are so housed in the big cities such as Madrid and Barcelona—and the need for new houses is imperative.

Not only is there the building requirements of the different municipalities to be cared for, but Spain has quite an important furniture industry and suitable woods are in demand. There is also to be taken into consideration that many other of Spain's industries call for lumber, e.g., her rolling stock plants, shipbuilding yards, projected railways, her mining upkeep and developments, her oil, wine, orange and fruit trades, her musical instrument industry, and the contemplated manufacture of aeroplanes for postal and commercial aviation.

Pitch-pine has been imported in considerable quantities from the United States, principally from Florida, coming both in direct sailing ships and in steamers; and in fact it was stated to the writer that pitch-pine was the most serious competitor of Scandinavian woods. Red pine used to arrive principally from Baltic ports and Sweden. Beech wood was imported from Hungary, ash from Russia, and mahogany, walnut and other fancy woods from Cuba, Mexico and the United States. Oregon and Californian woods, especially Oregon pine, are also well liked in Spain for their quality and large size. Canadian spruce is known favourably to a limited extent, and some importers were met who had received occasional shipments from Eastern Canada.

Dimensions of Spruce.

The dimensions of spruce deals required for the Spanish market were stated to be generally as follows: 24 by 8, 24 by 9, 24 by 11, 3 by 6, 3 by 7, 3 by 8, 4 by 9, 3 by 11 inches. Their length should average 20 feet, although the sizes range from 15 to 25 feet, and the larger lengths are preferred.

Dimensions of Pitch-Pine.

Logs of pitch-pine are imported as follows: 5 by 8, 8 by 8, 6 by 9, 8 by 9, 9 by 10, 10 by 10, 10 by 11, 10 by 12, 6 by 12, 8 by 12, 11 by 12, 12 by 12, 12 by 13, 12 by 14 inches. Lengths up to and even over 3 metres.

Boards of pitch-pine for the Spanish market have usually the following dimensions: 1 by 6, 1 by 9, 14 by 1, 2 by 9; also 1 by 3 and 1 by 4 inches. Deals 3 by 9, 3 by 12, 3 by 13, 3 by 14 inches. Battens 14 by 4, 1 by 4 inches. Other sizes 34 by 19, 44 by 10, 44 by 12 inches.

Red and White Pine.

Red pine comes in sizes of 1 by 4, 24 by 6, 24 by 7, 3 by 8, 3 by 9, 24 by 54, 24 by 6, 24 by 7, 24 by 74, 24 by 8, 14 by 4, 14 by 44, 14 by 5, 14 by 54, 14 by 6, 14 by 6, 14 by 64, 14 by 8, 14 by 9, 14 by 10, 14 by 11, 14 by 12, 1 by 44, 4 by 44 inches.

White pine comes in sizes of 3 by 7, 3 by 9, 3 by 10, 34 by 10, 44 by 10, 44 by 12 inches.

The lengths of boards vary from 6 to 28 feet, the most popular lengths being approximately 12 and 14 feet.

Beech.

Beech is imported in sizes of 4 by 4 inches.

Quantities of Lumber Imported.

The amount of lumber imported into Spain as logs, posts and boards, in 1913 reached 57,897 tons.

Box Shooks.

Box shooks required for the shipping of raisins, almonds and other fruits and vegetables, are made at present almost exclusively from native pine, although Portugal, Norway and Sweden have also been sources of supply, and Canadian trade would depend largely upon the c.i.f. prices quoted by our lumber houses. The general practice has

been for the fruit shippers in the spring to buy the pine by the thousand lengths of 2, 3 and 4 varas (a vara = 2.8 feet), 2½ inches thick, and 6 to 7 or 11 to 12 inches wide, and have the shooks worked up, in the northern or southern saw-mills. The boxes do not dovetail, but are nailed together.

Specifications.

The specifications for the raisin, almond, lemon and orange boxes are given hereunder:—

Box of 10 kg. raisins in layers, nett weight—

Ends: 240 by 140 by 13 mm.

Sides: 510 by 140 by 10 mm.

Lids: 510 by 260 by 6 mm.

Box for 10 kg. raisins in layers, gross weight—

Ends: 235 by 115 by 17 mm.

Sides: 500 by 115 by 13 mm.

Lids: 500 by 262 by 7 mm.

Box for 5 kg. raisins in layers, nett weight—

Ends: 240 by 70 by 13 mm.

Sides: 500 by 70 by 10 mm.

Lids: 500 by 260 by 6 mm.

Box for 5 kg. raisins in layers, gross weight—

Ends: 215 by 60 by 12 mm.

Sides: 490 by 60 by 8 mm.

Lids: 490 by 230 by 6 mm.

Box for 10 kg. loose raisins, nett weight—

Ends: 240 by 100 by 17 mm.

Sides: 480 by 100 by 12 mm.

Lids: 480 by 265 by 8 mm.

Box for 28 pounds almonds (shelled)—

Ends: 255 by 140 by 15 mm.

Sides: 580 by 140 by 12 mm.

Lids: 580 by 280 by 10 mm.

Quarter case for lemons or oranges—

Ends: 340 by 230 by 20 mm.

Sides: 730 by 230 by 15 mm.

Bottom: 730 by 260 by 12 mm.

Lid: 760 by 260 by 10 mm.

Partitions: bottom 340 by 230 to top of curve by 235 top by 20 mm. thickness.

Half case for lemons or oranges—

Ends: 390 by 255 by 20 mm.

Sides: 980 by 255 by 15 mm.

Bottom: 980 by 420 by 12 mm.

Lid: 1,020 by 420 by 10 mm.

Partition: bottom 390 by 255 to top of curve by top 260 by 20 mm. thickness.

2485 5½

Shooks for Packing Bananas, etc., in the Canary Islands.

The shooks for packing Canary Island bananas, tomatoes and potatoes, are also in demand, supplies now coming forward from Christiania. The more important specifications are given hereunder:

28-inch banana crates—

8 pieces 10 to 16 by 3 by $\frac{1}{2}$ inches.	2 pieces 14 by 2 by $\frac{1}{2}$ inches.
8 " 28 by 2 by $\frac{1}{2}$ inches.	4 " 28 by 3 by $\frac{1}{2}$ inches.

29-inch banana crates—

8 pieces 10 to 16 by 3 by $\frac{1}{2}$ inches.	2 " 14 by 3 by $\frac{1}{2}$ inches.
8 " 28 by 2 by $\frac{1}{2}$ inches.	4 " 29 by 2 by $\frac{1}{2}$ inches.

30-inch banana crates—

8 pieces 10 to 16 by 3 by $\frac{1}{2}$ inches.	2 " 14 by 3 by $\frac{1}{2}$ inches.
8 " 29 by 2 by $\frac{1}{2}$ inches.	4 " 30 by 2 by $\frac{1}{2}$ inches.

31-inch banana crates—

8 pieces 10 to 16 by 3 by $\frac{1}{2}$ inches.	2 " 14 by 3 by $\frac{1}{2}$ inches.
8 " 29 by 2 by $\frac{1}{2}$ inches.	4 " 31 by 2 by $\frac{1}{2}$ inches.

Double banana crates—

4 pieces 16 to 19 by 3 by $\frac{1}{2}$ inches.	4 " 22 to 28 by 3 by $\frac{1}{2}$ inches.
6 " 14 by 3 by $\frac{1}{2}$ inches.	16 " 26 by 2 by $\frac{1}{2}$ inches.

26-inch double banana crates—

4 pieces 10 to 16 by 3 by $\frac{1}{2}$ inches.	4 " 21 to 27 by 3 by $\frac{1}{2}$ inches.
6 " 14 by 2 by $\frac{1}{2}$ inches.	14 " 28 by 3 by $\frac{1}{2}$ inches.

28-inch double banana crates—

4 pieces 10 to 16 by 3 by $\frac{1}{2}$ inches.	4 " 21 to 27 by 3 by $\frac{1}{2}$ inches.
6 " 14 by 2 by $\frac{1}{2}$ inches.	14 " 28 by 3 by $\frac{1}{2}$ inches.

28-inch single banana crates—

8 pieces 10 to 16 by 3 by $\frac{1}{2}$ inches.	2 " 14 by 2 $\frac{1}{2}$ by $\frac{1}{2}$ inches.
12 " 28 by 2 by $\frac{1}{2}$ inches.	

30-inch single banana crates—

8 pieces 10 to 16 by 3 by $\frac{1}{2}$ inches.	2 " 14 by 2 $\frac{1}{2}$ by $\frac{1}{2}$ inches.
12 " 30 by 2 $\frac{1}{2}$ by $\frac{1}{2}$ inches.	

32-inch single banana crates—

8 pieces 10 to 16 by 3 by $\frac{1}{2}$ inches.	2 " 14 by 2 $\frac{1}{2}$ by $\frac{1}{2}$ inches.
12 " 32 by 2 $\frac{1}{2}$ by $\frac{1}{2}$ inches.	

33-inch single banana crates—

8 pieces 10 to 16 by 3 by $\frac{1}{2}$ inches.	2 " 14 by 2 $\frac{1}{2}$ by $\frac{1}{2}$ inches.
12 " 33 by 2 $\frac{1}{2}$ by $\frac{1}{2}$ inches.	

36-inch single banana crates—

8 pieces 10 to 16 by 3 by $\frac{1}{2}$ inches.	2 pieces 14 by 2 $\frac{1}{2}$ by $\frac{1}{2}$ inches.
12 " 36 by 2 $\frac{1}{2}$ by $\frac{1}{2}$ inches.	

Tomato boxes—

Tops and bottoms, 16 by 10 by $\frac{1}{16}$ inches in two pieces.

Sides 16 by 7 by $\frac{1}{16}$ inches in one piece.

Ends 9 $\frac{1}{2}$ by $\frac{1}{16}$ inches in one piece.

Laths 21 by $\frac{1}{16}$ by $\frac{1}{16}$ inches in one piece.

Laths 41 by 1 $\frac{1}{2}$ by $\frac{1}{16}$ inches in one piece.

Potato boxes.

Tops and bottoms 29 by 16½ by ⅞ inches in three pieces.
 Sides 29 by 7 by ⅞ inches in three pieces.
 Ends 15½ by 7 by ⅞ inches in one piece.

It is estimated that the total importation of shooks for packing Canary Islands bananas, tomatoes and potatoes in 1913 amounted to about 10,000,000 boxes and crates. The trade was, as it still is, supplied almost entirely from Gothenburg and Christiania, and sales to importers are on the basis of the Petrograd standard of 165 cubic feet, while the sales in the islands to retailers are made per 1,000 complete crates, and in the case of tomato packing cases 1,000 laths for joining up four boxes into one parcel are also included.

In getting in on the Spanish box shook trade, the question of laid down cost is most important coupled with the necessity, once orders are received, of making the shooks uniformly regular and absolutely accurate. Normally most of this trade is done with the principal importers direct on a credit basis, and credits usually range from 90 to 120 days from the sighting of drafts. Very few operations, notwithstanding present practices, are done normally on a cash basis.

BARREL STAVES.

Oak staves, in connection with tight cooperage for wine and olive-oil retainers, constitute an important part of Spain's lumber requirements. In 1913 imports into Spain of tight barrel staves and heading amounted to 73,438 tons, of which 72 per cent came from the United States and 20 per cent from Italy. Portugal was the other contributing country. Not only oak but chestnut staves are used. Difficulties connected with purchasing have lead Spanish houses engaged in this trade to establish their own agencies in America, where the goods can be inspected and the shipments supervised before export takes place.

OTHER LUMBER USES.

Spanish telegraph and mining props are generally made of native pine, and railway sleepers, so far as possible, of native oak. In fact Spain was an exporter of both props and railway ties to France during the war. Some lumber for mining requirements has, however, been imported from Sweden, while in 1913 there were 19,351 tons of sleepers imported. The quantity of wood-block paving employed in Spain is negligible.

CONCLUSION.

For the extension and the retaining of Canadian lumber trade in Spain, a regular transportation of some system is absolutely necessary. Apart from this, it seems impossible to compete with Scandinavian prices and to assure the regular cargoes which are essential, once an entrée is established, for holding the trade. A steamship service does not necessarily *per se* suggest itself, however, as being the only method, or always the most advantageous, as sailing vessels equipped to carry assorted sizes of lumber of say 500,000 feet a time would probably equally as well suit the Spanish market, although a steamship service is undoubtedly a prerequisite of trade extension in most lines.

But even a transportation system is not sufficient. Except spruce, Canadian woods, as Canadian, are not known in Spain, and before any substantial trade is done a campaign of popularizing and demonstration by means of samples, test charts, and personal visitation would seem to be essential. The consensus of opinion among the lumber importers interviewed was that Spain would continue to need, even in increas-

trary. Yet the Spanish producers are not in a position to handle exclusively the business offering, and the writer was informed that, especially in certain classes of high-grade papers, e.g., coated papers, and stationery and wrapping and wall papers, Canadian manufacturers might establish themselves, as the native competition is much more pronounced in the cheaper lines.

In the days anterior to the war, Germany, France, and Great Britain, were all exploiting this trade, and in most exported grades Germany exerted control, while the French were predominant in paper for cigarettes. Beginning for the United States, Holland and Italy were the principal sources in the market for a similar degree. For the year 1943 the imports of paper into Spain were valued at \$8,000,000.

[illegible]

Paper sheets are cut to metric sizes generally as follows: 70 by 100; 64 by 88; 55 by 77; 44 by 56; and it was stated that conformity to this practice would be essential to successful quotations.

The customary terms of payment in normal times are thirty to ninety days' credit with a small discount per settlement in thirty days.

Prices should at least be quoted c.i.f. Spanish port.

FINAL CONCLUSIONS

Perhaps in no line had Germany such a strong hold on the Spanish market as in electrical material and accessories. Her dynamos, motors, transformers, tramway equipment, electric fittings, etc., were found wherever their use was needed. Now, however, there is a changed condition, and both American and English goods are well placed on the market. In the electrical cable business the Italians have established a factory at Barcelona and are doing a very extensive trade in Spain. Telephone apparatus is also supplied to a large extent from Sweden, though American competition is making itself felt. Electric lamps (gas-filled) of a low voltage and consuming about 25 watts are obtained to some small extent from Holland, but Spain herself has a very large manufacturing capacity in this line and the industry is highly protected.

In the electrical accessory line it is imperative that Spain is given what she wants. She manufactures a considerable quantity of electrical accessories and though cheap, light in weight, and often flashy in appearance, yet such are the types popularized. Germany used to send her this kind of material, and Japan has more recently made her appearance with similar samples. Again Spain, for example, does not want tumbler switches, and consequently they are rarely seen in Spain. Lampholders are produced in the country, retail very cheaply, and are found generally satisfactory. Edison screw caps are used almost exclusively.

The cable made locally holds its own in price competition with the imported quality. In Spain not so much attention is paid to insulation, and in fact about 90 per cent of the installation in connection with house wiring is done, it is stated, with low grade flex on the insulators. Meters, the writer understands, are not produced in Spain, and as the customs duty is levied on weight, the lightest foreign product offered

will tend to have the advantage, provided the mark has been approved by the authorities. Measuring instruments are made in the country to some extent, but ammeters and voltmeters being fitted in cases of brass shellings.

Heavy electric material such as motors, dynamos and transformers are for the most part imported, the home production being, at even a superficial examination, greatly inferior. The suggestion was made to the writer that in catering to large electrical plants only the more complicated parts of the machinery should be offered, as the heavy framework could be left to the local foundries and a considerable saving thus effected in the payment of duties.

There is further reported to be a good opportunity for the introduction of motor-control gear. In this connection it should be pointed out that there is very little direct current used in Spain outside of Barcelona and Madrid.

With regard to electrical household appliances, etc., the Americans have, without question, the preponderance of the present trade. One very large electrical wholesale and retail store in Barcelona is doing an important business in electric irons, toasters, heaters, fans, domestic motors, etc., all of which are supplied by the States, and the manager intimated to the writer that, as this would undoubtedly be a developing trade, he would welcome Canadian offers on a competitive basis.

In considering any electrical trade with Spain, it is of value to remember that voltages generally range from 100 to 110.

Spain believes strongly in her electrical future, principally because of her wealth of white coal, and because there are throughout different parts of the country coal mines where the coal is of too low a grade to be exploited commercially as coal, but which could be used to produce energy cheaply by being burned at the mine shaft, and which would help to supplement the hydroelectric power during the drought seasons. There are many comprehensive proposals mooted in Spain today, the most important of which is the Dax-Algeiras electric railway (from the French frontier to the southern coast of Spain opposite Gibraltar), which it is proposed to connect up with Paris and thus constitute, when finished, a through direct route from London to Paris, Paris to Madrid, Madrid to Gibraltar, and Gibraltar to Morocco. The bill sanctioning such a line has already been approved by the Spanish Senate, and it is reported that both the English and French Governments are in sympathy, if not the actual protagonists of the scheme. This proposed railway is to be of international gauge, will be operated by electric traction, and will proceed along the shortest route or probably from Dax to Pamplona, Sarria, Madrid, Cuenca, Algeiras, accomplishing the course, it is hoped, from the French frontier to the southern border of Spain in ten hours.

Another big electrical project now before the Government is the construction of a national system for distributing electric current. The system as conceived by the Permanent Spanish Electric Commission, consists of a series of transmission lines running through or near all of the important consuming centres both on the northern and southern coasts with radial lines in the middle of the country at Madrid.

It is believed that such an undertaking, besides supplying cheap power to all users of electricity, would at the same time allow the unification of the frequency and voltage, the former of which is now standardized throughout Spain at 3 phase, 50 cycles, whereas the latter would be adjusted after a detailed study of industrial requirements. For the main branches of the transmission line, the commission referred to above recommend that the potential be at least 120,000 volts. It is reported that the final plans for the system are now being drawn up by a board of experts appointed by Government approval.

A third important electric enterprise, whose concession is now being awaited, is the utilization of the hydroelectric power of the rivers Elsa and Duero, in the vicinity of whose confluence it is expected to obtain some 350,000 horse-power. This district is now being surveyed by a Spanish group acting on the authorization of the Government.

In the fourth place, the electrifying of sections of the Spanish railways is under consideration. The first project for utilizing electric-power in this connection is that

relating to the northern line between Leon and Oviedo, where the highest railway altitude is reached.

In view of the electrical progress which Spain will undoubtedly achieve, even though such large projects as the ones just outlined may be of distant realization, it is advisable that Canadian manufacturers keep in the know and anticipate the electrical requirements of Spain.

THE CHEMICAL MARKET.

The following table will indicate the principal chemical imports of Spain in 1913, the figures given being reproduced from the official Spanish customs statistics—

	Tons
1. Nitrate of soda.....	3,245
2. Mineral fertilizers, including sulphate of soda, iron sulphate, sulphate of ammonium, potassium nitrate, chloride of potash and Strassfurt salts.....	92,221
3. Superphosphates and basic slag.....	150,275
4. Acetate of lime and iron pyrophosphate.....	662
5. Acetic acid.....	4
6. Citric acid, tartaric acid, citrates, tartrates.....	434
7. Hydrochloric and sulphuric acid.....	460
8. Nitric acid.....	27
9. Chlorine.....	—
10. Aluminium sulphate, chlorate and acetate, sulphate of magnesium.....	469
11. Carbonates, borates, alkaline silicates, ammonium salts.....	4,619
12. Calcium carbonate.....	48
13. Potassium and sodium chlorates and phosphoric acid.....	60
14. Sodium chlorate.....	4,275
15. Calcium chlorate.....	3,878
16. Copper sulphate and other insecticides.....	6,451
17. Glycerine.....	87
18. Caustic soda and potash.....	166
19. Sulphate of soda, carbonate of magnesium, and sodium sulphate.....	4,154
20. Oil and chlorhydrate of aniline.....	517
21. Other chemical products (n.o.s.).....	3,925

NOTES ON CHEMICAL TRADE.

Acetic acid is produced in Spain in almost sufficient quantities for domestic consumption. It is used for vinegar-making and industrial purposes, and is generally packed in 25-litre demijohns.

Caustic soda is also manufactured in Spain, but imports are necessitated. Its principal use is in soap-making, and supplies were received normally from Great Britain and Germany. The grades 70° to 72° and 60° to 62° arrived in iron drums of 50 and 100 kg.; the grade 50° to 52° in wooden barrels of 300 kg.

Potassium chlorate, also made locally, is imported normally from France, Great Britain and Norway. It comes in barrels of 100 kg., and is used in pyrotechnics and for pharmaceutical purposes.

Citric acid, for pharmaceutical and industrial uses, is only produced on a small scale in Spain, though naturally the raw material is accessible in the southern provinces. It is purchased in Italy, France and Great Britain, and is packed for the Spanish market in boxes lined with white cloth of 50 and 100 kg.

Glycerine.—There are at least fifteen distilleries in Spain for the production of glycerine, which is made both from candle and soap lye. It is used both industrially and for pharmaceutical purposes. The superior English grade is imported in glass bottles. Spain does a considerable export trade in this article.

Copper sulphate or blue vitriol is made in Spain, but due to its great need for spraying the vines and fruit trees, is also imported, packed in wooden barrels of 250 kg. It is obtained now from Great Britain, France and the United States.

Silverware.—There is considerable Spanish production of the article in the north of Spain.

Copperware.—There is considerable Spanish production of the article in the north of Spain. The principal producing centers are in the north of Spain. The principal producing centers are in the north of Spain. The principal producing centers are in the north of Spain.

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TEXTILES

The textile industry in Spain is one of the most important in the country. It is concentrated in the north of Spain, particularly in the Basque Country and the Cantabrian region. The principal producing centers are in the north of Spain. The principal producing centers are in the north of Spain.

IMPORTS

During the year 1913, the total imports of goods into Spain were valued at 1,000 million pesetas. The principal sources of imports were Great Britain, the United States, and France. The principal sources of imports were Great Britain, the United States, and France.

There is a great demand for rubber in Spain, particularly in the north of Spain. The principal sources of rubber are Great Britain, the United States, and France. The principal sources of rubber are Great Britain, the United States, and France.

Rubber bathing caps command a very good sale in the summer months as sun-bathing at the famous holiday resorts is very popular. Rubber wearing apparel is no classed together in the official statistics, 10 tons being accredited to this heading for 1913. Great Britain leads in imports at present. The rubber cloth imported in 1913 totaled 10 tons. This also comes principally from England.

Drug sandries, made of rubber, are handled by special stores dealing in such specialties along with sanitary and medical lines generally. Great Britain and the United States are responsible for the greater part of the business carried on.

LEATHER PRODUCTS.

The Spanish tannery industry, though important, still fails to turn out on the whole, high-class leathers. The quality of leather in other words, if considered sufficiently good in Spain for many manufactured products, and even if extensively used,

does not compare favourably with the Canadian, English and American tinned lard. In general lard and tallow are of a low standard, and even in the choice tinned variety, were prices competitive, some good business could and ought to be done.

The national and foreign tinned foodstuffs found in Spain has a wide variety of products and is of a high standard, and there is also times a defective assortment, on account of the quality of the material used. There is no doubt, however, that the quality is much better than they feel on the coast. The quality of Spanish foodstuffs is generally better than those made to order, and here is a factor in the quality of the workmanship. Even the countryman, who has no time to go to the Sunday, though he goes all the weekdays to the town and store.

Notwithstanding the popularity of the national product, American non-ferrous metal has found its way into the market, and in the national market it prices are mostly higher than Spanish ones. It is interesting to note that this class of metal is not so popular in Spain as it is in the United States, and in the part of the country, where the food is produced.

It is the opinion of the writer that a large and successful business in Spain is not to be done in the foodstuffs and in the national market, but in the national market.

In the case of the foodstuffs, the quality of the foodstuffs is not so good as in the United States, and in the national market, the quality of the foodstuffs is not so good as in the United States.

Imported goods.

Construction materials.—Construction materials are imported in large quantities from America, Sweden and Dutch, and in the case of the construction materials, the quality of the goods is not so good as in the United States, and in the national market, the quality of the goods is not so good as in the United States.

Fish and salmon.—There is only one important Spanish firm engaged in the salmon-fishing industry. The fish are of the highest quality, but the price of fish is not so good as in the United States, and in the national market, the quality of the fish is not so good as in the United States.

Cheese.—The Spaniards eat considerable quantities of cheese and, as might be expected, the domestic qualities are preferred, although normally Swiss, Dutch and French cheese are to be had on the market. French cream cheese or similar varieties are particularly well liked. The larger cities as Barcelona, Madrid, Bilbao and Valencia, are the most important consuming centres of this product.

Jams and marmalades.—In addition to the supplies furnished by the home industry, a well-known English house do a relatively small business. Other trade marks are not known to any wide extent.

Sauces and pickles.—This limited trade is practically divided between American and English suppliers. The Spaniards prefer the fresh salad or prepared native sauces.

Breakfast foods.—The only well-known breakfast food on the Spanish market is Quaker Oats, supplied by the United States, and also of Canadian origin. As the continental breakfast, i.e., coffee and rolls, is the universal custom in Spain, this product has no very large sale.

Butter.—Spanish-made butter is, as a rule, unsalted, and in addition to using home production, which is insufficient for requirements, Norwegian butter is imported.

Hams and bacons.—The preparation of hams is often a cottage industry in Spain, and some excellently sweet ham is cured. Notwithstanding, English and American hams and English bacon are known, but their purchase is limited.

Tea.—Coffee rather than tea is the national warm beverage of Spain, though China and Indian tea can be had at all the principal grocery stores.

Maple sugar.—A firm at Malaga was met which had just received samples of Canadian-made maple sugar, and which intended to investigate the opening for this product.

Biscuits.—The only foreign biscuits met with in Spain to any extent are of a celebrated English make. The native taste is rather for a rich tart, and the cake shops do a flourishing business in the French and Spanish pastry lines. Ordinary cake biscuits are also made well in Spain.

Sweets.—Besides the important Spanish industry which is centred in small and large shops throughout every town and city, French confectionery is imported, but on a very small scale. One of the best advertised sweets to-day in Madrid and Barcelona, especially in the latter city, is a chewing gum. The Spaniards, however, are not likely to become gum users to any degree.

Cocoa.—The cocoa bean, and not the pulverized or prepared cocoa, is imported. There is a pronounced liking for this drink, and it can be had in all the cafés. Cocoa in tins up to the present has had a negligible sale.

MOTOR CARS.

There is at present a great demand for motor cars in Spain, occasioned principally by the increased war-wealth of the Spaniard, who often is willing to-day to pay a very high price for an automobile, if it can by any means be obtained. Spain as a whole, is not suited at present to auto-touring, for though the roads in the north are good, those in the centre are bad, and in the south worse. There are but 8,000 kilometres of main roads, while there exist 10,000 and 28,000 kilometres respectively of second and third class highways. Not only are the roads generally poor but the price of gasoline is extremely high. To offset the disadvantages, Government plans are being drafted for bettering the roads, and private companies are being formed for the erection of crude oil refineries, especially as there are indications of considerable oil deposits in Spain. Notwithstanding present unfavourable conditions for the running of autos, there may be said to be a craze for the motor car especially in the larger centres.

In 1914, of the total number of cars in Spain, 40 per cent were French, 25 per cent Italian, 15 per cent English, 7 per cent Spanish, and 13 per cent American. In 1918 the percentages show a pronounced variation: French cars 22 per cent, Italian 12 per cent, English 7 per cent, Spanish 30 per cent, and American 29 per cent. The deduction is obvious, viz.: American cars are getting the bulk of the foreign orders. Naturally throughout the war deliveries from the belligerents were extremely difficult, and the United States began to leap ahead in auto exports to foreign countries, which place she still retains in Spain by a considerable margin.

The writer's impression, after talking with various motor car importers, leads him to believe that any priced car will sell in Spain to-day that can be guaranteed delivery. The lower priced, medium-priced, and luxurious cars are all in evidence, with a predominance of the second type named. If Canadian manufacturers can fulfil short-time contracts through agencies established in Barcelona or Madrid, there is, without question, a wide scope for business at present.

The opening for motor lorries and coaches for goods and passenger services, may also be more appreciable a little later, and such opportunities might be advantageously anticipated and followed.

In connection with the importation of automobiles, there is an excellent opportunity for the sales of automobile accessories, a trade in which both English and American houses for the most part, are now doing considerable business. The maintaining of stocks in the large distributing centres would be essential to success in this line, which may be said to include the whole gamut of motor supplies and accessories.

WHEAT FLOUR.

The flour-milling industry in Spain was built up only after great efforts and with no little loss, and has suffered during the war by the many decrees of the Government restricting free buying and circulation of wheat produce, prohibiting exports, and

standardizing prices. Nevertheless, profits are being maintained, the mills have operated steadily, and Spain is able to produce a very large part of the wheat flour necessary for her own uses. The policy has been so far as possible to buy that wheat was necessary for supplementing the home crops, and to mill the flour locally, even though shipments of foreign flour are often received.

The mixtures used in the manufacture of flour vary according to the qualities of the wheat milled, and the kinds of flour desired. There are also mixtures either of different qualities of home wheat, or wheat with rye, or home with foreign wheat. The grades depend upon the respective tastes of the different markets.

There is also a smaller or greater output of flour from the wheat, according to the zones of cultivation. This output ranges from 74 per cent up to 82 per cent. The official percentage of minimum flour output has been fixed by royal decree at 75 per cent.

The most general weights for flour are 100 kilogrammes, single bags, gross.

FLOUR-MILLING MACHINERY.

In view of the important flour-milling industry in the country, there is a demand for machinery and accessories for new plants, and repairs for those already in existence, but the trade in this equipment is, to a large extent, controlled at present by Swiss firms which have their own agents in Spain, although Great Britain also is meagrely represented in this important business.

OFFICE FURNITURE AND ACCESSORIES.

The writer was struck by the general un-Canadian appearance of Spanish business offices generally, and of some of the leading banking and industrial offices in particular. In fact, the neatly and up-to-date furnished office is the exception and not the rule. Modern office equipment is therefore not to any appreciable extent utilized. In Barcelona and Madrid, however, both American and Spanish furniture, the latter modelled on that from the United States, can be seen in a few big shops, and it is these two centres that the principal business in such lines is done. The Spaniards use a good deal of native furniture, which are copies of old designs, and there still seems to be a reluctance in most quarters to part with the old-fashioned system and install more commodious furnishings.

Filing cabinets and other similar office devices, almost exclusively of wood, are also on sale, and are coming into more general use. Steel sections and accessories are not popular because the tariff duty and freightage render prices comparatively high.

Loose-leaf record books and loose-leaf filing systems are also not in any extensive demand, as in conformity to Spanish commercial regulations, business houses keep their records in books fully bound, folded and paged, a method which is supposed to prevent any dishonest practice in the keeping of records or in the exhibiting of misleading documents in suits of law.

With regard to other office supplies, it may be pointed out that (1) American carbon paper commands the market at present; (2) that typewriter ribbons come from England and the United States; (3) that stamp pads are of German or French manufacture; (4) that sealing wax is of French or British origin; (5) that pencils are of German, Austrian, American and English trade marks; (6) that pen points arrive from England, France, Switzerland, and Germany; and (7) that fountain pens come from the United States and Germany.

TYPEWRITERS.

The United States is well represented in the Spanish typewriter market and does, it is stated, fully two-thirds of the total trade. English machines are also to be had, and in ante-bellum days the Germans pushed the sale of several of their makes which,

if inferior in quality, were well established on the market, and competed most favourably as regards price. German selling terms were also more accommodating. There is a Spanish make, but its purchase is very limited. It is estimated that over 1,000 typewriters are imported every month into Spain and the demand is not only continual but increasing.

SEWING MACHINES.

It is estimated that over 80 per cent of the sewing machines sold in Spain are made in the English factory of an American company. A few other types are sold to a very limited extent, while in pre-war days about 10 per cent of the business was carried on by the Germans. The custom in Spain is to import only the machines themselves, and erect the stands and framework in the country, thereby avoiding very heavy customs duties. Sewing machines are sold both outright and on the hire or instalment plan of so many pesetas per month. The company referred to have built up a most far-reaching organization of their own throughout the peninsula, but the German business was done by wholesalers who had the woodenwork made, and sold the completed machine to the retailers according to their demands. Successful competition in this article would be extremely difficult.

TOYS.

Consequent upon the gradual reduction in German toy arrivals, the Spanish toy industry, already considerably developed, showed signs of increasing activity, and is in a comparatively good position to-day. In fact, the value of toy exports at present from Spain is, it is stated, four times what the total value of imports was in 1914. Not only are Japanese toys, however, seen in the shops, but it is believed that Germany will regain much of her former pre-eminence in this trade. The demand at present is most insistent for mechanical and wooden toys. The terms in this trade are stated to be generally thirty days, or 2 per cent discount with cash.

MUSICAL INSTRUMENTS.

There is a growing demand for all kinds of de luxe articles on the part of the Spaniards, many of whom now find themselves in a position to buy such goods owing to the fortunes made during the war. Under this de luxe heading may be placed pianos, player pianos, viotrolas, gramophones, etc. The Germans had the Spanish piano trade under control in pre-war days, while the French were masters in phonographs and similar instruments. Of more recent years the player-piano is finding acceptance, and those seen are principally of American origin. The writer was informed, moreover, of one commercial traveller from the United States who returned to America with his pockets bulging with orders for viotrolas after a month's stay in Spain. This but indicates the general tendency to have luxuries in Spanish homes.

Pianos are at present very difficult to secure, and a good business could undoubtedly be done with Canadian makes if the matter were taken up energetically and deliveries could be assured. Although the Germans sold mostly a medium-priced upright piano with the usual candlesticks attached, yet type and price to-day do not seem to be primary considerations.

HABERDASHERY.

The writer was informed that though most of the goods coming under the heading of haberdashery could be obtained from Spanish makers, yet an energetic and intelligent trying out of the market would doubtless lead to trade development. France has worked up a substantial business for example in cotton socks for men, in white silk gloves, and in men's garters. The United States sends men's suspenders and braces, and a Canadian line of the latter was also seen in one of the big Malaga stores. The neckwear to be had is generally of inferior quality, with the exception of the genuine English silk knit ties, and business is offering.

Ready-made shirts in the more subdued colours, with turned-back unstarched cuff, and either closed or in coat style, would also find openings, though very frequently shirts, like boots, are made to order. In addition silk stockings with reinforced heel and toe, and ladies' coloured silk underwear, are imported. Men's underwear is mostly made in Spain, and collars are manufactured in the continental measurements. Handkerchiefs are both made at home and imported from England. Further, high-grade imitation jewellery is sold quite extensively.

TOILET ARTICLES.

American and French goods predominate in the foreign supplies of toilet articles on sale, and perfumery shops, which are quite distinct from pharmacies in Spain, have on display various lines of United States soaps (shaving and toilet), tooth-pastes, face creams, toilet powders, etc. In the case of toilet waters and perfumes, the French article is imported, although eau de cologne and similar products are distilled in Spain. Toilet soap of an excellent quality is also put up in the country in boxes of three, six and twelve cakes. Perfumes are sold usually in bottles of 10, 15, 20, 25, 30, 40, and 50 grammes. In this toilet preparations trade the United States has obtained a big share of the business that once went to Germany.

PART V.

Banks, Railways, Shipping, Postal and Telegraph Service.

BANKS AND THE BANKING SITUATION.

If in the first weeks of the war the solidity of various Spanish institutions of credit was shaken and the activity of a great many more decreased as a result of the economic repercussion occasioned by the outbreak of the conflict, yet the adjustment which followed, together with the necessity of credit, the increase in money circulation and in savings, and the development of the nation's industrial life, all tended to favour banking operations and to promote the prosperity of the banks. This progress which has taken place is reflected in the increased savings deposited in the banks, in their augmented capital, and in the greater dividends declared. What is more, several new banks have been established, and branches of existing banks opened up.

Espana Economica y Financiera, the leading financial weekly of Spain, published in July an interesting study of the banks operating in Spain. With the reports of thirty-seven of the leading private banks as a basis for deduction, it was pointed out that, whereas the paid-up capital of all these institutions averaged 226,600,000 pesetas annually for each year of the 1909-13 period, in the 1914-18 period the corresponding figure was 260,930,000 pesetas, or an increase for the war period of 34,330,000 pesetas. In addition, while the paid dividends for the pre-war years 1909-13 of these same banks averaged annually 16,660,000 pesetas, they rose to 21,160,000 pesetas annually during the 1913-18 period.

Further, the savings in all the Spanish banks increased as follows during the period 1915-18:—

Year.	Deposits.
1915.	4,264,555,000
1916.	4,782,495,000
1917.	5,345,847,000
1918.	6,250,000,000

So much for capital, dividends and deposits. What is also worthy of note is the fact that during the war period the Spanish banks began to open numerous branches

facilities, are not only gaining the confidence and the approval of the Spaniard, but are even outstripping many of the Spanish banks themselves. The Anglo-South American Bank has branches in Barcelona, Madrid, Bilbao, Vigo and Sevilla, the London County, Westminster and Parr's Bank, Ltd., operates in Madrid and Barcelona, and the Royal Bank of Canada in Barcelona. It is now reported, moreover, that the Italian banks, viz.: the Commerciale and the Banca di Sconto are about to set up at Barcelona, and latest advices also mention that the Banks of England and Mexico are coming to Spain.

ROYAL BANK OF CANADA.

The Royal Bank of Canada with its extensive organization in Spanish-speaking countries throughout Central and South America, is especially equipped for carrying on business between Spain and the Spanish-American countries which are so vital to Spain in her commercial relations, and which are bound to her by so many common ties of interest. The existence of a Canadian bank will also undoubtedly prove an essential of no small account in the development of Canadian-Spanish trade, but Canadian manufacturers, exporters, and importers, will only be able to appreciate its services when they begin to take an interest in the Spanish market and commence and develop actual trade exchanges. Increased trade will not depend upon the fact of the bank's existence in Spain, but the extent to which Canadian traders will avail themselves of the facilities it afford.

THE GERMAN TRANSATLANTIC BANK.

The German bank, with offices in Madrid and Barcelona, carried on a very considerable business in ante-bellum days, but its operations were most appreciably affected by the war, and up to the present its tangible reassertion has been relatively negligible. However this may be, it is to be predicted that eventually at least its old-time power will manifest itself, and even recently it may be presumed that much silent work has been taking place. The credit facilities of this bank were most advantageous to the Spanish importer, and on account of its first-hand information as to the standing of the merchant, it was prepared to open a credit for him, and when the proper endorsement had been given by both importer and exporter to carry him over a period of several months or in some cases one, two or three years. It did more, however, than give credit to the Spanish importer as it also would finance German agents in Spain to the extent of discounting accepted bills for any reasonable period which on some machinery orders amounted to from three to five years. It moreover was always in a position to link up Spanish buyers with home producers both by its direct contact in Spain and by its distribution of data in Germany. Another way in which the German bank made itself felt was in the interest it took in the industrial undertakings and development of the country, being wise enough to see the opportunities thereby offered for plant and equipment quotations. In fact it was a trade bank primarily, and all other transactions were treated as of minor importance. It made full use, for its own archives, of the information it obtained in negotiating the documents of the Spanish or other non-German traders, and in welcoming and encouraging such work, the findings of which were always communicated directly or indirectly to interested parties at home, believed it was doing a patriotic duty.

SPANISH RAILWAYS.

Railway communication in Spain leaves much to be desired, and some of the more appreciable weaknesses of the railroad system may be enumerated as follows:—

(1) *The mileage is small.*—Altogether there are 9,680 miles in operation, with which total Spain has fewer miles of railways per square mile than any other leading European country. For every twenty square miles of territory there is but one mile of railroad, and there is only one mile of railroad for every 2,169 inhabitants.

(2) *The gauges vary.* The Spanish railways are classified as broad gauge (1.67 metres—5.48 feet) and as narrow gauge (1 metre or 3.28 feet). The former is found on the main lines, the latter on the secondary or "linking-up" lines. About one-third and two-thirds of the total mileage belong to the respective systems. With two distinct gauges within her borders, there is the added disadvantage that neither of these gauges conforms to the international European standard of 4.69 feet. Thus Spain's internal and external traffic are both materially hampered, as transshipment is so frequently necessitated at home and always at the French frontier.

(3) *The rails are not as stout as they should be.* Thus off the main lines, all of which radiate from Madrid, travelling is tediously slow. For example, the writer spent a week in a first class travelling coach going from Murcia to Granada, a distance of some 214 miles, travelling at the rate of twelve miles an hour, and proceeding in all directions of the compass. It is often more convenient to return to Madrid and take the train to Seville than try to cross country, especially as there run from the capital eight Provincial railways to the principal outlying districts.

(4) *The gauges are often extremely difficult.* This is perhaps understandable owing to the rugged nature of the country, but it would seem that more careful or deliberated engineering originally would have offset considerably this drawback, even though a larger outlay of capital would have been involved.

(5) *The system is not a double track.* The absence of any extended system of double tracking is a heavy handicap to the free flow of traffic, although latterly two of the most important railway companies have begun this construction.

As a rule, the road situation in Spain kept in with the slow and industrial and commerce relatively of the country. In actual count of extension, over a recent ten-year period, the average annual increase is very slightly above seventy miles. This backwardness is partly attributed to a lack of interest on the part of the Government, as early suggestions for a constructive policy had a progress of railway programme which had almost been completely abandoned. In addition, a lack of interest and energy in the construction seem to be up to date as follows:

1. Its extreme slowness owing to the mountainous characteristics of the country.
2. The complicated and at times discouraging laws in relation to railway concessions are cited.
3. The withholding of the necessary capital on the part of the Spanish banks, the Spanish public and foreign investors.

But the situation will, of necessity, it is stated, gradually improve. Already there are many proposed roads before the Government, and the Ministry of Public Works is said to be determining which lines are most urgent, and which are the most adapted for linking up present systems and tapping districts still unserved. In all it is estimated that 40,000 additional miles could be built to advantage, and the projected building is the subject of much discussion to-day. Whether all or only a part are now completed, it is the expressed opinion that an immediate expansion is inevitable. It may be pointed out that by Royal decree of September 22, 1917, the Government has guaranteed the payment, by State bonds, of the interest on the capital invested after the granting of concessions, the amount of such bonds in any one year not to exceed 12,000,000 pesetas.

The significance for Canada of the proposed Spanish railway development lies partially in the fact that all track extensions will entail additional rolling and stationary stock, while the replacing of much of the dilapidated material now in existence should also be carefully watched.

Electric traction on several of the secondary railways is to-day a mooted question, and there will also probably be a development along this line.

RAILWAY CAPITAL.

The total capital invested in the construction of the broad gauge lines is approximately 3,500,000,000 pesetas, of which about 900,000,000 pesetas are capital stock,

2,250,000,000 pesetas bonds, and 350,000,000 State subsidies. Nearly all the capital is foreign, the largest of the trunk lines being for example in the hands of the French. A large number of the bonds are now held by Spaniards, however, and in fact though once the monopoly of the Paris market, they are of late finding their way to Madrid. The average cost per mile of the broad gauge railways, the majority of which are single track, has been approximately 182,500 pesetas. The narrow gauge railroads have cost over 600,000,000 pesetas, much of the invested capital being Spanish.

FINANCIAL PROGRESS.

The increasing prosperity of all the Spanish railways is worthy of note in the last years anterior to the war, when after many difficulties the railroads entered upon an era of financial success. In 1910 the total revenue derived by all railways in Spain amounted to 346,901,400 pesetas, to 403,654,761 pesetas in 1913, and in 1917 to 487,251,136 pesetas. Expenses, however, were correspondingly raised from 167,367,822 pesetas in 1910 and from 211,683,252 pesetas in 1913, to 325,322,046 pesetas in 1917. While the heavy traffic consequent upon the suspension of coastwise shipping in 1915 and 1916 tended to improve the general condition of the railways, in 1918 the inflated price of coal and other materials began to counterbalance the increase of earnings. In December, 1918, 15 per cent increase on the existing tariffs was authorized by the Government, but the latest information reveals the fact that expenses are outrunning current revenue, and a further advance is being demanded by the management of the companies. With things as they are, no dividends can be distributed to the stockholders nor can funds be set aside for the maintenance, improvement and extension of the lines.

RAILWAY STATISTICS.

Altogether there are twenty-seven broad gauge lines in operation, and fifty-one narrow gauge railways. The narrow gauge lines of the three classes are

	Km.
Norte	2,084
Madrid-Zaragoza-Alcalá	2,002
Andaluces	1,661
Madrid-Córdoba-Portugal	1,399
Castilla	748
San Sebastián-Zaragoza	660
Medina-Salamanca	77
Montbrió-Vigo-Porto-Venice	609
Aragón	599
Salamanca-Portugal	584
Zafra-Huelva	180
Lorca-Baza-Almería	165

REVENUE AND EXPENDITURE.

The following statistics show the revenue and expenditure of the three most important railway companies for 1913, 1917 and 1918:

Lines.		1913.	1917.	1918.
Norte—	Revenue Pesetas.	154,790,000	189,120,000	200,350,000
	Expenditure "	76,970,000	123,000,000	166,870,000
Madrid-Zaragoza-Alcalá—	Revenue	123,999,000	165,157,000	187,260,000
	Expenditure	64,370,000	102,785,000	140,610,000
Andaluces—	Revenue	28,600,000	47,750,000	59,420,000
	Expenditure	15,050,000	23,640,000	27,740,000

THE SHIPPING SITUATION IN SPAIN

Spain's geographical position gives her 2,000 miles of sea coasts along which are a hundred harbours, and hence her coastwise and overseas trade is of primary importance. Naturally the war exerted an appreciable influence on Spain's shipping activities, and the gradually lessening numbers of foreign vessels calling at Spanish ports has resulted in more freight being carried in Spanish bottoms, though considerable reductions in both inward and outward tonnage are noticeable, due to causes which need no reiteration here. The other most obvious effect has been the greater use of sailing vessels arriving at Spanish ports, which fact may be attributed mainly to the more extended employment in coastwise shipping. The high ocean rates moreover, and the dangers of the submarine tended to encourage railway freight traffic throughout the peninsula, and merchants have often forwarded and received by rail what formerly was accustomed to go or come by sea.

The statistical tables which follow illustrate clearly the position of the inward and outward traffic of Spain during the quinquennial period 1913-18.

TOTAL SPANISH VESSELS ARRIVING.

The following statistics express the number of boats belonging to the Spanish mercantile marine which entered Spanish ports in the five-year period 1913-18, with cargo:

	Spaniards	Sailing Vessels	Tonnage
1913	1,000	174	1,174,000
1914	1,004	171	1,175,000
1915	1,000	171	1,171,000
1916	1,007	171	1,178,000
1917	1,000	171	1,171,000
1918	1,000	171	1,171,000

TOTAL FOREIGN VESSELS ARRIVING.

The following statistics express the number of boats belonging to foreign flags which entered Spanish ports in the five-year period 1913-18, with cargo:

	Spaniards	Sailing Vessels	Tonnage
1913	1,000	174	1,174,000
1914	1,004	171	1,175,000
1915	1,000	171	1,171,000
1916	1,007	171	1,178,000
1917	1,000	171	1,171,000
1918	1,000	171	1,171,000

RESULTS OF SPANISH AND FOREIGN BOATS ARRIVING.

The following table summarizes the two preceding:

	National	Foreign	Total
1913	1,000	174	1,174,000
1914	1,004	171	1,175,000
1915	1,000	171	1,171,000
1916	1,007	171	1,178,000
1917	1,000	171	1,171,000
1918	1,000	171	1,171,000

Whereas in 1913 the vessels flying the national flag which arrived in the ports of Spain represented 60 per cent of the total number, and the vessels of foreign flags 40 per cent, the percentages for 1918 are 89 per cent and 11 per cent respectively.

VESSELS IN BALLAST.

The figures shown hereunder give the total number of Spanish and foreign boats in ballast entering Spanish ports in the 1913-18 period:

	National	Foreign	Total
1913	4,782	1,773	10,555
1914	4,153	4,171	8,324
1915	4,962	2,781	7,743
1916	4,856	1,228	8,078
1917	4,604	2,679	7,279
1918	4,451	1,197	6,618

TOTAL SPANISH BOATS CLEARED.

There is reproduced herewith a table showing the number of boats belonging to the Spanish mercantile marine which cleared Spanish ports in the quinquennial period 1913-18, with cargo:—

	Steamers.	Sailing Vessels.	Total
1913	7,865	1,563	9,428
1914	6,864	1,815	8,679
1915	7,206	2,195	9,311
1916	7,107	3,051	10,158
1917	5,170	5,172	10,342
1918	4,331	5,686	10,017

TOTAL FOREIGN BOATS CLEARED.

There is subjoined a table showing the number of foreign boats which cleared Spanish ports in the quinquennial period 1913-18, with cargo:—

	Steamers.	Sailing Vessels.	Total
1913	1,112	179	8,121
1914	6,045	260	6,305
1915	7,995	364	4,437
1916	4,203	509	4,702
1917	2,908	292	3,399
1918	2,195	473	2,578

TOTAL SPANISH AND FOREIGN BOATS CLEARED.

A resumé of tables 5 and 6 shows total numbers of Spanish and foreign boats cleared from Spanish ports during 1913-18 period.

	National.	Foreign	Total
1913	9,428	8,121	17,549
1914	8,679	6,305	15,014
1915	9,311	4,437	13,748
1916	10,158	4,702	14,861
1917	10,342	3,399	13,672
1918	10,017	2,578	12,595

TOTAL TONNAGE DISCHARGED FROM SPANISH VESSELS.

Hereunder is given a table showing the tonnage discharged in the ports of Spain from vessels flying the national flag (thousands of tons):—

	Steamers.	Sailing Vessels.	Total.
1913	2,249	24	2,273
1914	2,060	17	2,077
1915	1,729	30	1,759
1916	2,277	28	2,305
1917	1,484	52	1,536
1918	1,124	51	1,175

TOTAL TONNAGE DISCHARGED FROM FOREIGN VESSELS

Hereunder is given a table showing the tonnage discharged in the ports of Spain from foreign vessels (thousands of tons):—

	Steamers	Sailing Vessels	Total
1913	1,429	93	1,522
1914	1,396	81	1,477
1915	1,396	194	1,590
1916	1,369	136	1,505
1917	628	114	742
1918	178	69	247

TOTAL CARGO DISCHARGED.

A resumé of the two preceding tables shows the total cargo discharged in Spanish ports during the 1913-18 period (thousands of tons):—

	National	Foreign	Total
1913	2,274	1,147	3,421
1914	2,077	1,179	3,256
1915	1,759	1,667	3,426
1916	2,396	1,866	4,262
1917	1,326	717	2,043
1918	117	217	334

TOTAL CARGO LOADED.

The table herewith given illustrates the total number of tons loaded in Spanish ports during the period under review (thousands of tons):—

	National	Foreign	Total
1913	4,566	16,117	20,683
1914	5,485	15,967	21,452
1915	2,478	7,689	10,167
1916	2,864	7,117	9,981
1917	2,294	7,117	9,411
1918	1,926	478	2,404

THE SPANISH MERCANTILE MARINE.

A reference has been made in another part of this report to the shipbuilding industry in Spain. It is here purposed to outline the fluctuating movement in the tonnage of the Spanish mercantile marine during the war:—

VESSELS AND TONNAGE.

Year	Sailing Vessels Tons (dead weight)	Steamers Tons (dead weight)	Total Tons
1913	47,508	697,325	744,833
1914	32,970	844,322	877,292
1915	32,979	844,322	877,301
1916	29,118	875,549	904,667
1917	31,191	816,757	847,948
1918	31,299	719,548	750,847
1919	74,299	691,498	765,797

The perceptible reduction in the above recorded tonnage between the years 1915 and 1918 is due of course to the operations of the German submarines and in part to sales of Spanish vessels to foreign flags.

It has been calculated that the number of ships of 250 tons or more torpedoed from the beginning of the war to June, 1918, aggregated 51 with a total tonnage of 123,176 tons. Floating mines accounted for 6 others of like size totalling 16,731 tons. On the other hand in 1915, 19 Spanish vessels with a total tonnage of 44,594 were sold, and as huge profits were being derived from such transactions the tendency was to put still others on the open market. Such procedure, threatening as it did the denationalization of the Spanish mercantile marine, already encouraged by State subventions, led the Government to issue three consecutive decrees in self-protection. The first prohibited from January 7, 1916, the sale to foreign countries of vessels whose tonnage was superior to 500; the second from January 26, 1917, extended the prohibition to vessels of more than 250 tons; and by the third decree of December, 1917, it was for-

bidden to sell any kinds of boats of whatsoever capacity to foreign countries. A midsummer decree of this year, however, modified these restrictions and has authorized the sale abroad of sailing vessels of less than 500 tons register, as the shipbuilding yards are turning out small sailing craft at a greater rate than required for domestic needs.

It may be pointed out that the subsidies given by the Government to shipbuilding companies since 1909 have been of undoubted stimulus to this important industry, evidence of which may be seen in the fact that the tonnage of the mercantile marine increased by 161,000 tons during the five-year period 1910-15. It is now predicted that Spain will soon have a national shipping service of 1,000,000 tons and will grad-



Puerta del Sol, Madrid

ually regain her former greatness as a mercantile power. Although at the outbreak of the war Spain's merchant marine occupied the twelfth place in comparison with other countries, at the beginning of the century her standing was in the sixth place.

TRAFFIC IN PRINCIPAL PORTS.

The following table, prepared from data in the government returns of Spain for 1913, shows the cargo loaded and discharged from and for foreign countries in the principal Spanish ports:—

Ports.	Cargo Discharged from Foreign Destinations.	Cargo Loaded for Foreign Destinations.	Total Tons
	Tons.	Tons.	
Bilbao	919,249	3,068,267	3,987,516
Barcelona	2,112,703	213,937	2,326,640
Huelva	290,874	3,010,418	3,301,292
Valencia	545,447	654,779	1,200,226
Sevilla	359,695	912,270	1,271,965
Malaga	87,319	128,169	215,488
Santander	215,632	930,999	1,146,631
Cartagena	100,058	588,900	688,958
Vigo	110,034	20,836	130,870
Cadiz	151,437	232,648	384,084
Corunna	100,398	9,116	109,514
Alicante	191,013	133,076	324,089
Tarragona	160,329	142,148	302,477



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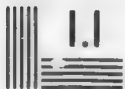
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THE PORT OF BARCELONA.

The port of Barcelona, from an economic point of view the chief Spanish seaport, is one of the most important in the Mediterranean, and is in fact only surpassed in importance by Marseilles, Genoa, Trieste and Alexandria.

The inward and outward movements of this port for the 1913-17 period are given hereunder:

Years.	Ships Arrived.	Tons of Merchandise Discharged.	Tons of Merchandise loaded.
1913	1,192	2,164,875	379,121
1914	1,391	2,154,218	346,966
1915	1,546	2,678,846	743,964
1916	1,491	2,918,144	791,948
1917	1,297	1,489,111	679,939

COMPARISON OF VOLUME AND VALUE OF TRAFFIC.

In 1917 the total value of foreign imports was 338,394,000 pesetas, and exports 313,812,119. The merchandise discharged from coasting vessels was valued at 187,379,000 pesetas, while that shipped outwards to other Spanish ports was valued at 312,868,000 pesetas, the balance in favour of goods discharged amounting to over 125,000,000 pesetas.



Panoramic View of Barcelona.

According to statistics for 1909-13, the amount of exports in tons was about one-seventh of the amount of imports, while the value was approximately one-half.

Due to the fact that the principal imports into Barcelona consist of raw materials and articles necessary for industrial purposes, they are generally of a large volume in relation to their value, and as on the other hand the greater proportion of exports are manufactured goods these have a large value in relation to their volume. In this respect Barcelona differs from Bilbao, which rivals it in its movement of shipping, but which chiefly exports raw materials (iron ore), the amount of general merchandise only reaching 8 per cent.

BARCELONA MOST IMPORTANT FOR SPANISH TRADE.

The district from which Barcelona draws its trade is much smaller than Marseilles or Trieste, each of which practically serves the whole of central Europe. As a port, Barcelona draws principally for the extensive Catalan trade, and its influence is virtually not felt beyond the Spanish frontiers. For this reason, extensive warehousing for transit trade has up till now scarcely been needed in this port.

HARBOUR NOT NATURAL.

The port is not a natural harbour and an enormous amount of construction work has had to be carried out, but it may now be considered as safe as any other artificial port existing.

UPKEEP OF PORT.

Like all the other Spanish ports, Barcelona belongs to the State, and is controlled by a board of administration on which the authorities (Naval, Customs and Health) have representation. Acting upon this board are also the local Government bodies, i.e., the municipality, the provincial chamber of deputies, and associations of a commercial and industrial character, such as the Chamber of Commerce and Industry, the Public Works Society, and the National Association of Shipowners and Shippers.

The money necessary to pay for the work already done and for the improvements and extensive development at present going on, was and is still in part obtained by a tax levied on all merchandise imported. Since 1909 the State has given an annual subvention of 150,000 pesetas. In order to meet the enormous cost of upkeep and extension, the board of administration has negotiated several public loans amounting in all to 28,000,000 pesetas; the interest and amortization of these loans are punctually met from the above sources.

PORT FACILITIES.

The total length of the breakwater at Barcelona is more than 3 kilometres, the entire installations occupy a superficial area of 300 hectares, of which 85 form the outer roadstead, while 150 are occupied by the basins (all of which are completely sheltered from the wind and sea), and the rest is taken up with quays and embankments.

The length of quays to which ships can be moored is about 8½ kilometres, with a depth of water varying from 8 to 11.20 metres. The ground available for the deposit of goods is over 250,000 square metres, more than one-fifth of which is at present roofed in, and in a short time over one-third of the space will be so covered.

For the transport of merchandise, the port has at present over 9½ kilometres of railway, and is linked up with the lines running into Barcelona. To facilitate operations of loading and unloading, there are a number of bridge derricks, and electric, hydraulic and floating cranes. The warehouses, which cover some 7,200 square metres of ground, are four-storied buildings with cellars and are provided with chambers for cold storage and grain elevators. There is also a bonded warehouse, in which goods for re-exportation can be deposited without having to pay import duties. Preparations are being made for the installing of large bonded warehouses, where certain kinds of products can be mixed, repacked, etc., and if convenient, re-exported without paying customs duties on entering. These warehouses will be managed by a special board.

For the repairing and cleaning of ships, there is a Clarke & Stanfield floating dock which can receive vessels of 170 metres long and of 6,000 tons in weight. There is also a yard for careening ships of 300 tons, and several shipyards belonging to private companies.

PROJECTED WORKS.

The different works projected and likely to be finished in a relatively short time are as follows: The construction of silos with a storage capacity of 50,000 tons of cereals; a large bonded warehouse which is to be temporarily installed in sheds; a drydock for ships over 170 metres long; a cleaning and dredging equipment; a central power station for electricity; and later on the construction of a complementary inner port on the left side of the delta of the Llobregat river.

SHIPS ON BARCELONA REGISTER.

At the end of 1917 the number of ships on the register of Barcelona amounted to 148, with a gross tonnage of 185,331 and a net tonnage of 115,959. The principal shipping companies using the port are the Transatlantica, with 121 ships (98,697 tons gross); the Trans-mediterranean, with 14 ships (19,453 gross tons), and Hijos de José Tayà, with 19 ships (17,186 tons gross).

It is also a regular port of call for numerous other Spanish shipping companies, whose ships are, however, registered at Cadiz, Bilbao, Sevilla, etc.

PORT DUES AND TAXES.

The port dues payable by steamers arriving in Barcelona to load or to discharge, are as follows:—

Port Upkeep (Obras del Puerto).—A local tax imposed with the sanction of the Government to meet the cost of the upkeep and the expenses connected with the additions being made; it is levied on the actual weights of cargo discharged, at the rate of 2 pesetas per ton of 1,000 kg., irrespective of the class of goods of which the cargo is composed, or the country from which it comes. It is not levied on ships loading.

Transport Tax.—The transport tax was instituted in March, 1900, to take the place of the then existing national dues on shipping. It is levied on vessels loading and/or discharging, as follows:—

For practical purposes navigation is divided into three classes:—

The 1st class includes coasting trade between Spanish ports and is limited to vessels under the Spanish flag.

The 2nd class includes the trade between Spain and European countries, Asiatic and African ports in the Mediterranean and in the Atlantic down to Cape Bojador.

The 3rd class refers to Spanish trade with the rest of the world.

2nd Class.

The figures shown hereunder are all for one ton of 1,000 kg. for cargo loaded or discharged:—

Description of Goods—	Discharging Dues.	Loading Dues.
	Pesetas.	Pesetas.
1. Iron ores, slag and pyrites.. . . .	1.00	0.50
2. Other metalliferous minerals	1.50	1.50
3. Coal and coke.. . . .	0.50	0.50
4. Lime, cements, paving stones, clays for building purposes.. . . .	0.50	0.50
5. Pig-iron	2.00	0.50
6. Pig-lead, copper matte.. . . .	2.00	1.00
7. Common salt.. . . .	3.00	0.10
8. Cereals, wine.. . . .	4.00	2.00
9. Manures*.. . . .	2.00	0.25
10. Empties.. . . .	free.	free.
11. All other merchandise and bullion.. . . .	5.00	2.50

* Under headings manure are included nitrates of soda, sulphates of potash and soda, salt of Strassfurt phosphates of lime and chloride of potash.

3rd Class.

The figures shown hereunder are all for one ton of 1,000 kg. for cargo loaded or discharged:—

Description of Goods—	Discharging Dues.	Loading Dues
	Pesetas.	Pesetas
1. Iron ores, slag and pyrites.. . . .	1.00	0.20
2. Other metalliferous minerals.. . . .	2.00	1.00
3. Coal and coke.. . . .	2.00	0.50
4. Lime, cements, paving stones, clays for building purposes.. . . .	0.50	0.50
5. Pig-iron.. . . .	2.00	0.50
6. Pig-lead, copper matte.. . . .	3.00	1.00
7. Common salt.. . . .	3.00	0.10
8. Cereals, wine.. . . .	5.00	2.50
9. Manures*.. . . .	2.00	2.25
10. Empties.. . . .	free.	free
11. All other merchandise and bullion.. . . .	7.00	5.00

* Under headings manure are included nitrates of soda, sulphates of potash and soda, salt of Strassfurt, phosphates of lime and chloride of potash.

TONNAGE DUES.

Steamers loading or discharging part cargoes in Spain for or from transatlantic ports, when having on board other cargo from or bound to European ports, must pay:—

0.75 pesetas net registered ton if handling over one-half of their carrying capacity, or

0.50 pesetas per net registered ton if handling less than one-half of her carrying capacity.

Steamers loading exclusively fresh fruit cargoes are, however, excepted. Steamers have also the option to pay instead of above a yearly tax of 2 pesetas per net registered ton for 12 months.

Steamers loading or unloading a full cargo in Spain do not pay these tonnage dues.

QUAY TAX.

This tax is actually levied on steamers according to the length of the ship, the time in port, cargo handled, etc. For sake of convenience it is reckoned at 0.10 pesetas per ton on coal and up to 0.20 pesetas per ton on general cargo.

Pilotage.	TARIFFS IN FORCE.	
	Pre-war.	Present.
	Pesetas.	Pesetas
From 50 to 100 tons.. . . .	15	22.50
101 to 200 "	20	30.00
201 to 400 "	25	37.50
401 to 600 "	30	52.50
601 to 800 "	35	60.00
801 to 1,100 "	40	62.50
1,101 to 1,500 "	45	67.50
1,501 to 2,000 "	55	82.50
2,001 upwards, for every 500 tons extra.. . . .	5	7.50
Mooring.		
From 50 to 100 tons.. . . .	5.00	7.50
101 to 200 "	7.50	11.25
201 to 400 "	10.00	15.00
401 to 1,500 "	12.50	18.75
1,501 to 2,000 "	15.00	22.50
2,001 tons and upwards, for every 1,000 tons extra.	5.00	7.50

Pilot's boat expenses are included in these tariffs.

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THE UNIVERSITY OF CHICAGO PRESS AND THE UNIVERSITY OF MICHIGAN PRESS

By royal decree of September, 1914, Cádiz was created the first free port of Spain. The question of establishing free ports in the peninsula had often previously been proposed, but it was only on the outbreak of war when the seizure of various



Calc. from the Sea.

free ports. Europe was interrupted that any definite action was taken by the Spanish Government. As a matter of fact the immediate occasion of this move on the part of the Cortes was a request addressed to the Ministry of State by the Spanish Chamber of Commerce in Havana which strongly advocated its establishment. Acting on the authorization of the Government, the Junta of Public Works at Cadiz, to whom the concession for working the free port was given, transferred their rights to the Sociedad Credito y Docks de Barcelona, which already was operating the commercial warehouses at Barcelona.

The free port of Cadiz, as the phrase implies, allows *inter alia* the depositing of merchandise in the warehouses provided, without the payment of any customs duties or other charges except of course storage and insurance dues. The period for the



THE PORT OF CADIZ

development of the port has been rapid in the last few years. At present buildings already existing are being utilized, but plans are now blue-printed for the construction of new and ample warehouses connected more directly with the port and the railway terminals. The use of free ports in the development of international traffic is evident, and one of the most conspicuous advantages of the free port of Cadiz are the facilities offered for the temporary storing of goods to be transhipped to Morocco and Northern Africa. Canadian exporters should keep this fact in mind.

Free port privileges have also been granted to Bilbao, Santander, Vigo, Corunna, and Barcelona, but in none of these harbours is the free port as yet a reality. Commercial warehouses, however, which involve in a limited degree free port privileges, exist at Barcelona, Mahon and Malaga.

POST OFFICE, TELEGRAPHS AND TELEPHONES.

The Spanish Post Office carried in 1913 in the land service 352,386,574 letters, post-cards, printed papers and samples, as compared with 471,091,768 in 1916, the last year for which published statistics are available. In the international service the total in 1913 for similar objects was 106,637,389, and in 1916, 47,318,784. In 1916 the postal revenue amounted to 37,998,804 pesetas, and expenditure 19,552,275.

The length of telegraph lines in 1913 was 60,591 miles, and in 1916, 67,534 miles. The total number of interior messages sent and received amounted in 1913 to 5,039,890 and in 1916 to 7,084,763. The corresponding figures for international messages were 2,213,919 and 1,816,188. The number of telegraph offices in 1916 was 2,435.

In 1913 there were 85 urban telephone systems and 197 interurban circuits. The total number of telephone stations was 29,932.

The *Compania Nacional de Telegrafia sin Hilos* holds the government concession for the public service with ships, and between the Peninsula and the Canary Islands and the international service with England, Italy and Austria, this company operates ten stations, viz., at Aranjuez, Barcelona, Cape Palos, Cadiz, Cape Finisterre, Las Palmas, Santander, Soller, Tenerife and Vigo.

With reference to the telegraph and telephone systems it may be pointed out that the latter, and more especially the trunk system between the principal cities, has several particular advantages for interior communications over the former, which does not generally give a very efficient service. The outstanding features of the telephone system is (1) its acceptance of written messages for telephonic transmission, which is usually quicker than the telegraph and which costs approximately the same; (2) the system of night despatch by which messages marked for sending between midnight and 8 a.m. the following morning are transmitted at a greatly reduced rate and are delivered early in the day; and (3) the convenience offered of arranging for a call with a person in a distant city at a stipulated hour.

PARCEL POST TO SPAIN FROM CANADA.

The *Canadian Official Postal Guide* for 1915 states that parcels up to 11 pounds may be transmitted by post to Spain.

"The number given to the parcel at the time of posting should be entered on the customs declarations. Parcels are delivered not by the post office but by the railway companies and at certain railway stations only. The name of a railway station where parcel post business is done must form part of the address both on the parcel and on the despatch note. The addressee must usually obtain the parcel at the station specified. Parcels to be called for should be addressed "en gare," not "Poste Restante."

SPECIAL PROHIBITIONS FOR PARCEL POST.

"Letters, coin, firearms and ammunition, air-guns, reproductions of charts published by the Spanish Ministry of Marine, missals, breviaries, rosaries, relics, etc.; pharmaceutical preparations or patent medicines of unknown composition, of which the prescription has not been published, substances containing saccharin, unmanufactured tobacco, tobacco seed and juice, plants (unless accompanied by a phylloxera certificate to which, if in English, a French or Spanish version should be appended), gold, silver (including articles mounted with these metals), jewellery and playing cards, etc.

"A parcel may not consist of two or more packages tied together."

PART VI.

Tariffs, Commercial Taxation, Trade Marks.

THE SPANISH TARIFF.

There has been of late a keen agitation among the manufacturers of Spain, and more especially those of Catalonia, for raising the national custom duties and thereby rendering foreign competition more difficult and indirectly promoting Spanish exportation. At the same time many of the agricultural interests appear to be against any such added protection, and as in many other countries to-day a press and lobby battle is waging on this subject. Whatever the results may be, the Spanish Government

appointed some time back a tariff revision committee whose definite report will it is expected be shortly presented to Parliament for discussion and final revision. No tangible hint could be had in diplomatic circles when the writer was in Spain as to the probable findings of the Tariff Commission, but it seems very likely, from the pressure being brought to bear on the Government, coupled with its desire to foster foreign trade, that the new tariff will show an upward tendency, but not the 50 to 100 per cent increase demanded by the Fomento del Trabajo Nacional, which association, centred in Barcelona, is perhaps ultra-nationalistic in sentiment. Not a few leading Spaniards told the writer that Spain in her own interests could not now annihilate foreign competition, and the new Spanish tariff when enacted may not be as cutting a weapon as the same part of the press would like it to be.

The present tariff professes to be founded on the following rules:—

(a) The maximum duty imposed on natural and artificial manures and on the raw materials for the manufacture thereof may not exceed 1 per cent of their value;

(b) The duty on natural products (except manures and foodstuffs) not produced in Spain, but used as raw material by Spanish industry, shall not exceed 10 per cent of their value;

(c) The duty on raw material similar to that produced in Spain shall not exceed 15 per cent. Ships, agricultural machinery, live-stock, and drugs are included hereunder;

(d) On natural products not employed as raw material and on foodstuffs other than those which constitute a monopoly, a duty not exceeding 20 per cent of their value may be imposed;

(e) A duty of from 15 to 50 per cent of their value shall be imposed on manufactured articles except on those which Spanish industry does not produce. The duty on the latter shall be from 10 to 35 per cent of their value.

As the revised tariff will probably be made known in the course of the next few months, the writer has not translated the existing one for insertion in this report, but for information concerning the present duties Canadian manufacturers would do well to communicate with the Commercial Intelligence Branch, Department of Trade and Commerce, Ottawa.

CERTIFICATE OF ORIGIN.

In order that such Canadian goods, as require a certificate of origin may be guaranteed against differential treatments in the custom houses of Spain, her colonies and foreign possessions, or enjoy the benefits of any rates of custom duties consistent with treaty arrangements, a certificate proving their Canadian origin must be presented to the Spanish customs. The articles for which such certificates of origin are required are specially indicated in the official edition of the Spanish tariff.

OCTROI DUTIES.

In quoting through prices to merchants' warehouses in the different cities of Spain, attention must be given to the Octroi duties prevailing. Generally these are levied on only domestic articles such as food, drink and fuel, but sometimes the municipalities include manufactured products, such as for example hardware and machinery. Before therefore an attempt is made to give delivered prices of any goods to the Spanish buyer in his own stores it is advisable to consult local agents, as not only is there a divergence in the application of these Octroi duties throughout Spain, but the tariff list in the individual cities varies from time to time.

TAXATION.

The following summary of Spanish taxation as related to business and the operation of commercial travellers in Spain is extracted from the British Government publication previously alluded to:—

"Foreign companies and individuals are subject to the following taxes:—

1. "Contribucion industrial" (business tax).
2. "Impuesto de utilidades" (income tax).
3. "Impuesto de negociacion" (stamp tax or tax on capital).

1. "Contribucion Industrial" (Business Tax).

"This tax imposes certain fixed charges on all persons engaged in any kind of industry or trade, art or science, manufacture, or holding any kind of office, whether of Spanish or foreign nationality. These charges are graduated according to the supposed relative importance or remunerative qualities of the particular avocations. The law contains five tariffs, under which all trades, industries, etc., are grouped into classes.

"Under the Finance Act of the 30th December, 1910, an additional Treasury tax of 20 per cent is established on the business tax for commerce and industry in certain classes of the different tariffs.

"A municipal charge on the business tax is payable both on the business and Treasury taxes, and does not exceed 32 per cent for capitals of provinces and cities of more than 30,000 inhabitants, and 13 per cent for all others.

"The collector's tax amounts to 5 per cent on the sum total resulting from the above taxes.

2. "Impuesto de Utilidades" (Income Tax).—(Law of March 27, 1900.)

"This law imposes a tax on:—

- "1. Income derived from services or personal labour without assistance of capital.
- "2. Interest, dividends, bonuses of any kind derived from the investment of capital according to the tariff of this law.
- "3. Income derived from personal labour combined with capital in the pursuit of industries not taxed in any other form.

"All persons of Spanish or foreign nationality are alike subject to the payment of this tax on incomes earned in Spain, whether paid direct or through persons domiciled in Spain. The law establishes accordingly the three following tariffs:—

"Tariff No. 1—Incomes derived from Personal Service.

Tariff No. 2—Incomes from Capital.

Tariff No. 3—Incomes derived from Labour and Capital combined.

POSITION AND TAXATION OF COMMERCIAL TRAVELLERS.

"The position of British commercial travellers in Spain is regulated in part by the Hispano-Swiss Commercial Treaty of 1906, and in part by the Spanish Industrial Contributions Law of 1896.

"The exemption from taxation accorded by the treaty to Swiss commercial travellers may be claimed by those of all other countries enjoying most-favoured-nation treatment. It is, however, extended only to those who represent a house or houses situated in their own country, who do not sell their samples, and who refrain from taking orders from private individuals. Whether they represent one or more firms is immaterial.

"All other categories of travellers are liable to the taxes provided for by the Industrial Contributions Law of 1896 or by such amendments thereto as have subsequently been introduced by Royal Order.

"The following rules may be laid down:—

- "1. Travellers who possess no fixed residence in Spain, who represent one or more British firms, who neither sell their samples nor take orders from private individuals, but confine themselves to taking orders on samples from commercial houses, are entirely exempt from taxation.

"2 The position of travellers, with a fixed residence in Spain, but who do not sell their samples, is regulated by article 40 of Tariff 2 of the Industrial Contributions Law. This article refers to 'agents with a fixed residence who, without buying or selling, keep on the establishment samples on which Spanish commercial firms give orders for articles to the factories or houses which the agent represents.' It also refers to 'those agents who do not keep samples, but make use of advertisements and circulars in order to bring their articles to the notice of Spanish firms to whom they send catalogues, etc., from which orders may be given.' The article continues: 'Such agents must not, however, receive the goods which they have sold from samples, accept the money for such goods, nor transmit it to their principals.'

"The contributions to which travellers are liable under this article are as follows:

	Pesetas
In Madrid and Barcelona	300
and provincial capitals	220
other towns	164

"(These contributions do not apply to the Basque provinces or to Navarre, where a special tariff prevails.) See *post*.

"3. Travellers who wish to sell the samples which they bring with them are regarded as 'sellers of articles of novelty of all kinds, who keep no open establishment, but receive orders with the right to sell in the whole peninsula.' Their position is regulated by a Royal order of the 2nd April, 1910, which fixes the contribution to which they are liable at 2,000 pesetas.

"According to the new Finance Act passed on the 30th December last (1916), additional taxes are established on the above contributions as follows:—

"Treasury tax, 20 per cent on business tax ('Contribucion Industrial').

Municipal tax, 32 per cent on both business and Treasury taxes, for capitals and cities of over 30,000 inhabitants; 13 per cent for all others.

Collector's tax, 5 per cent on the total taxation.

THE BASQUE PROVINCES.

Bilbao.

"Travellers in fine jewellery or gold and silver watches pay annual taxes as follows:—

	Pesetas
To provincial deputation	41.77
town council	37.98
Total	<u>79.75</u>

"Travellers bringing with them samples of cloth, hardware, or any other manufactures pay as under:—

	Pesetas.
To provincial deputation	33.39
town council	30.36
Total	<u>63.75</u>

"Travellers seeking orders for a Spanish firm in which they are employed as clerks, and which firm pays the corresponding tax at their residence, as proved by presentation of receipt, will not pay above taxes if they limit their sales to shops or merchants in the city. If they offer their goods to private individuals they will pay 25 per cent of the above tariff.

"Commission agents, with fixed residences in Bilbao, receiving and despatching produce or goods for account of others, pay annually as follows:

To provincial deputation.....	150.00
To town council.....	150.00
Total.....	300.00

"If these latter only make use of samples, showrooms, advertisements, or circulars to obtain orders without taking part in the sale, nor receiving the goods sold, nor collecting their value, they pay annually: -

To provincial deputation.....	48.37
To town council.....	43.98
Total.....	92.35

"The town council collect and issue one receipt for both of these taxes.

Province of Guipuzcoa.

"Commercial travellers carrying samples of no value, and merely booking orders from the trade, pay no tax whatever. If they solicit orders from private persons, or if they offer goods for sale, they are liable to a tax of from 150 to 250 pesetas.

Province of Navarra.

"There are no formal regulations for the province. In Pamplona city commercial travellers who limit themselves to booking orders for their principals pay no taxes. Travellers selling goods pay 100 pesetas for three months or less. In most of the other towns no taxes are payable.

"It is essential that commercial travellers of all categories should be provided with a certificate of identity."

PERSONAL CERTIFICATE.

In addition to the foregoing it should be pointed out that every person permanently residing in Spain is obliged to arm himself every year with a personal cedula or warrant, which constitutes a certificate of residence, and in which birth, date, civil status, profession, residence and signature are recorded. These certificates are issued by the different municipalities at rates proportionate to the individual income made.

REGISTRATION.

It is also important to note that every individual or company conducting business operations in Spain must be duly registered in one business class or another according to his particular occupation, each class having its annual fixed tax. Such tax is collected by the authorities in charge of inland revenue.

TRADE MARKS IN SPAIN.

There follows a statement on the registration of trade marks in Spain taken from a British Government publication entitled, *Standing Information on Spain, 1917*:—

"The protection given by the laws of Spain to property in trade marks is the same for foreigners and natives, provided that the registration of the mark be properly effected in compliance with the laws.

"The law at present in force is the Royal decree of the 20th November, 1850, combined with the modifications and amendments enacted from time to time in the form of Royal decrees and Royal orders, the Declaration of Great Britain and Spain

of the 14th December, 1875, for the mutual protection of trade marks, and the resolutions adopted by the International Congress for the protection of industrial property, of which Spain is a signatory.

"The protection of a registered trade mark in Spain is in perpetuity, and there are no annual taxes or fees of any kind.

"2. The course of procedure to be followed by owners of British trade marks to obtain protection for their marks in Spain is as follows:—

"1. To file in the Ministry of Agriculture ('Fomento')—

"(a) An official copy of the English registration of the mark, legalized by the Spanish consul in London.

"(b) Twelve copies of the mark.

"(c) A cliché or electro which must not exceed 10 centimetres by 6 centimetres in size.

"2. The certificate of British registration must be translated at the Madrid Foreign Office by the official translator.

"3. A formal petition for the registration of the trade mark in Spain must be drawn up on stamped paper and forwarded with the translated documents and cliché to the Secretary of the Minister of Agriculture ('Fomento').

"4. The petition, together with a description and copy of the mark, is published in the *Boletín oficial de la Propiedad intelectual e industrial*, and for ninety days from the date of publication protests may be lodged against the registration of the trade mark.

"5. On the completion of the ninety days, if no such protest has been received, an official certificate of title to the trade mark is issued and published in the *Boletín oficial de la Propiedad intelectual e industrial*.

"The charges incurred in these proceedings are as follows:—

	Pesetas.
Translation (about)	20.00
Stamped paper for petition and certificate	4.80
Issue of title and tax	30.00
Stamps, etc.	4.80
Total	59.60

"The usual charge of an agent in Spain for registering a trade mark, including the above expenses, is four pound sterling.

"3. The previous registration of a British trade mark in the United Kingdom is necessary, in order to obtain its registration in Spain.

"4. There is no limit of time within which any persons who have used a trade mark in Spain before registration are obliged to register their marks in order to secure the benefit of the laws in force in Spain.

"5. The owners of British trade marks, who have registered their marks in Spain, in accordance with the laws, can obtain redress in the event of the infringement of their trade marks in the ordinary common law tribunals of the country.

"6. A trade mark, the property of a British subject, can become the property of a native in Spain, in consequence of neglect to register the mark in Spain. A Spanish subject can obtain the right to use any trade mark that is not already registered in Spain, should he fulfil the regulations for the registration of that mark and no protest be made during the period allowed by law."

Appendices.

SPANISH GOVERNMENT ENCOURAGING NATIVE INDUSTRY.

*(Summary of Law, dated March 2, 1917, which appeared in "Official Gazette," March 3, 1917.)**

"The Bill aims at the development of already existing Spanish industries and those to be established hereafter. The following are specifically mentioned as eligible for the enjoyment of the benefits of this law:—

"(a) Shipbuilding (up to 600,000 tons) for the national mercantile marine, with the proviso that the machinery shall be a product of national industry.

"(b) Coal-mining and processes for the manufacture of by-products of coal.

"(c) Iron and steel works and manufactures of iron, steel and other metals employed in producing special steels.

"(d) Smelting works for copper, zinc, brass, lead, tin, and aluminium ores, and plants for manufacturing these metals and tinplates.

"(e) Manufactures of tools not hitherto made in Spain.

"(f) Agricultural industries for the production of seeds and other produce not hitherto obtainable in Spain and for disposing of such produce.

"(g) The export trade in cattle, wines, oils, fruits, and Spanish agricultural produce in general, under the management of growers' trusts.

"(h) The manufacture of fertilizers and agricultural machinery.

"(i) The utilization of waterfalls producing a minimum of 1,000 horse-power.

"(j) The manufacture of chemical products in general, and more especially drugs, medicinal products, and dyestuffs.

"(k) Textile industries and wool-washing for employment therein.

"(l) The manufacture of electrical material of every description.

"(m) The production of scientific material.

"(n) Printing, engraving, and stationery, preferably editorial enterprises devoted to the exportation of Spanish publications and literature to South America.

"(o) Industries created in Spain to meet the needs of the policy of penetration in Morocco.

"Beneficiaries under this law must be Spanish, wholly or in part, this provision applying also to their personnel, etc. All material employed must be Spanish, unless unobtainable in Spain, or unless the cost exceeds that of the foreign article by more than 10 per cent.

"State support may be granted—

"1. By special resolutions without direct financial assistance, which may take the form of exemptions from stamp duties, deferment or reduction of taxes, exemptions from customs duties, customs protection, special railway and shipping rates, agreements with the Bank of Spain and the Banco Hipotecario, exemption from local duties, and expropriation of waterfalls for power.

"2. By loans.—The maximum amount of bonds which may be in existence at any one time will be 150,000,000 pesetas, bearing a maximum interest of 5 per cent.

"3. By guaranteed interest on the capital invested.—This interest shall not exceed 5 per cent per annum on the actual cash capital invested and in existence at the time the concession is granted, profits being deducted from the amount required to make up the 5 per cent. The maximum grant to be included in the budget for any one year shall be 10,000,000 pesetas, and the maximum duration of the guarantee shall be fifteen years.

"Industries producing a surplus for export may be granted bounties to enable them to compete in foreign markets, provided that no trust has been formed with the

* From the British Government Publication entitled "Standing Information on Spain, 1917."

object of raising prices. This will not apply, during the war, to export trade with belligerent countries. The maximum annual sum to be devoted to this purpose is fixed at 10,000,000 pesetas.

"It is not proposed to protect any industry in such a way as to give it an unfair advantage over similar industries already in existence.

"Concessions which may be granted under this law must be applied for before the 31st December, 1919, which period may be extended for a further three years should this course be deemed desirable in the national interests."

BIDDING ON GOVERNMENT CONTRACTS.

Although Spanish law establishes that Government contracts for all kinds of services and public works shall be filled by articles of national production only, yet a proviso allows the State to receive proposals from foreign manufacturers on the following grounds:—

1. Owing to the imperfection of the national product, declared after analysis and experiments in the presence of the interested parties.
2. Owing to any notable difference in the cost of the national product in the place of production, as compared with the foreign product.
3. Owing to a recognized emergency, which Spanish industry is unable to meet.
4. Owing to the non-existence of the said industry in Spain.

These bids on proposed Government contracts are called for at certain periods throughout the year and often involve substantial amounts. But owing frequently to the shortness of time allowed for the submission of tenders it is difficult to conclude business unless foreign concerns are represented in Spain by agents who can watch for these proposals as published in the *Official Gazette* and who can be trusted to exercise discretion on the expediency of offering quotations before cabling their principals for confirmation. In those cases where foreigners compete with Spanish manufactures the foreigners' bid may be accepted unless it is 10 per cent lower than that of the Spanish producer.

In addition a royal circular order of July, 1908, provides that when a *concurso* or *subasta* has been held for articles reserved for home production, but tenders have either not been forthcoming or have not been accepted, foreign tenders will be admitted at the second *concurso* or *subasta* on the same conditions laid down in the first instance.

Some of the articles called for in 1917 by the Government departments on which foreign firms could submit tenders were: (1) various metallurgical products, iron and steel and other metals or alloys; (2) certain driving and other machinery; (3) electrical material such as measuring apparatus, telegraphic and telephonic equipment, electrical cable, electrical supplies, and electrical installations for centrals and lines; (4) fire-extinguishing accessories; (5) certain army and navy supplies.

AMERICAN ACTIVITY IN SPAIN.

The commercial activity of the Americans is plainly evident in all parts of Spain. One meets American drummers in the hotels, buys American goods in the shops, rides in American autos and sees American products in home, factory and office. Toilet articles, men's haberdashery, certain food products, automobiles, motorcycles, electrical goods, machine tools, agricultural machinery, musical instruments, office furniture, boots and shoes, chewing gum, fountain pens and pen points are among some of the articles most commonly seen from the United States. It is not an accurate statement to claim that the absence of supplies from other sources alone established the larger market for American wares. American activity itself is partially responsible. Not only does every mail bring dozens of offers to leading importing houses, but American business men have been coming in large numbers and armed with introductions from

Government departments and banks to many important Spanish firms. True some of these sojourners have been disappointed in the prospects offering and have had to readjust their views as to permanent openings, but the larger percentage of them have gone back with substantial orders and optimistic of the future. Whether American selling conditions will lend themselves to repeat orders in days of keener competition is a mooted question, but the fact remains that American goods are being advertised and are being bought and that agencies are being opened up, all of which facts are at least not construed by them as discouraging.

The United States did not enter the Spanish field of banking till this year and has in this respect been outrun by both Great Britain and Canada, but now the National City Bank of New York is establishing attractive premises in Madrid and is reported to be opening branches in Barcelona, Bilbao, Cadiz and Vigo.

Not only have travellers and the banking interests come, but the Americans are reported to be taking a keen interest in certain industrial enterprises in Spain. For example, at Cadiz it is believed that the Ford Motor Car Company are to erect a \$300,000 assembling plant to handle over 500,000 cars a year, especially trucks for North African markets. Other industrial undertakings in the Barcelona district are also reported to be pending.

In shipping circles it is believed that American financial interests are behind a proposed express steamship line between New York and Vigo, which port, according to the scheme, is to be linked up with Hendaye on the French frontier and thence with Paris. This project, however inviting on first examination, seems hardly to lend itself to an early execution, as at present there is only a single metre gauge between Vigo and the frontier and that too for not all the distance.

Americans are, moreover, said to be interested in the projected new trunk electric line from Dax, near the French frontier, to Algeciras in the south of Spain. Already it may be mentioned there are forty-eight American locomotives running on two of the principal Spanish railway systems.

Finally, several special delegates have recently visited Spain on behalf of the United States Government Department of Commerce and their reports are now being circulated among interested parties in the United States. Thus both government and business men are putting forth more than an ordinary effort to obtain an appreciable share of Spain's import trade.

A writer in an English trade review referring recently to American activity in Spain says:—

"To-day there is not a corner of Europe free from the barrage of America's commercial army. The American soldier with his machine guns has been succeeded in Europe by the American "drummer," armed with samples of everything from a steam-engine to a toothpick. Not only is the Spanish merchant and shopkeeper being supplied with all sorts of things, but even the Spanish flies are being massacred in their millions with American 'Tanglefoot.' The fact is that while we are making up our minds, the United States is doing good, sound, practical work and doing it quickly, and this with the American capacity for rapid output constitutes our greatest danger in the keen struggle to recapture the trade markets which were ours before the war."

SPANISH IMPORT AND EXPORT TRADE.

The following table will show the value of the total Spanish imports from and exports to each principal country with which Spain does trade during the year ended December 31, 1913.

(Coin and bullion is herein included.)

	Imports.	Exports.
United Kingdom.....	244,669,199	231,571,221
Argentine Republic.....	110,970,664	70,964,239
Austria-Hungary.....	16,221,002	2,727,810
Belgium.....	45,033,813	45,278,431
Brazil.....	14,436,889	5,468,845

(Coin and bullion is herein included.)—Continued.

	Imports.	Exports.
British Possessions in Africa	61,960	72,656
" " America	9,032,886	2,751,050
" " Asia	59,944,918	895,385
" " Oceanin	1,635,157	862,379
Bulgaria	80,823	793
Chile	5,868,093	7,584,278
China	5,029,902	3,082
Cuba	2,477,549	64,538,839
Denmark	9,176,512	4,184,438
Ecuador	3,744,553	1,088,605
Egypt	11,726,669	609,553
France	204,268,202	327,744,316
Germany	185,369,062	74,418,566
Gibraltar	1,542,334	5,025,561
Guatemala	26,361	98,148
Italy	15,805,757	34,722,408
Japan	629,587	77,713
Mexico	6,260,896	15,851,307
Morocco	4,468,218	9,318,082
Netherlands	18,642,386	62,874,331
Norway	16,404,405	2,240,177
Peru	372,728	1,585,056
Philippine Islands	21,400,054	7,050,385
Porto Rico	7,854,900	2,502,669
Portugal	56,510,154	47,367,918
Roumania	5,632,749	12,559
Russia	44,973,518	8,286,803
Salvador	350,893	278,827
Sweden	17,824,254	1,835,519
Switzerland	24,926,797	14,094,947
Turkey	12,718,096	5,761,019
United States	167,485,782	72,194,898
Uruguay	5,638,221	10,851,510
Venezuela	9,835,908	3,772,347
Other countries	51,784,614	41,370,318
Totals	1,414,947,889	1,195,007,719

SPANISH IMPORT TRADE ACCORDING TO ARTICLES.

The following table illustrates the total quantities and value of the principal articles of merchandise imported by Spain during the year ended December 31, 1913:—

Articles Imported.	Quantity.	Value. Pesetas.
Animals—		
Cattle No.	15,541	7,079,800
Horses	5,579	4,906,118
Mules and asses	23,175	8,650,055
Pigs and swine	23,842	2,002,728
Sheep	241,864	6,530,328
Other	74,005	1,177,038
Butter kg.	479,019	1,298,141
Carriages and vehicles		28,994,778
Charcoal, firewood and other combustibles . kg.	13,490,315	1,489,354
Cheese "	2,607,556	5,606,245
Chemical products		20,744,288
Clocks and watches		6,654,336
Coal 1,000 kg.	2,701,913	70,249,742
Cocoa in the bean, not roasted	6,166,342	12,161,683
Coffee "	15,134,385	29,514,840
Coke and briquettes	396,419,112	13,874,669
Colours, dyes and varnishes		16,535,055
Cork and manufactures of		2,526,440
Cotton—		
Raw kg.	88,242,466	132,363,699
Yarn and thread "	286,668	2,549,120
Manufactures		14,972,662
Earthenware, chinaware and porcelain		7,622,691
Eggs kg.	5,593,207	9,116,916
Electrical machinery and apparatus		42,687,359

SPANISH IMPORT TRADE ACCORDING TO ARTICLES—*Continued.*

Articles Imported.	1913.	
	Quantity.	Value.
Feathers..	12,641	490,152
Fertilizers..kg.	279,773,656	28,446,017
Fish—		
Cod and stock fish, salted.. . . .kg.	54,749,615	41,609,555
Fresh.."	6,390,225	2,044,872
Salted, smoked and pickled.. . . ."	800,509	344,219
Flax, hemp, jute and ramie—		
Raw..kg.	36,687,312	15,926,692
Yarn.."	3,749,414	5,666,070
Manufactures.."		1,757,164
Fruits..kg.	3,144,991	2,390,187
Glass and glassware..		4,802,661
Grain—		
Maize..kg.	569,071,628	91,051,460
Pease, chick.."	12,982,175	7,010,375
Wheat.."	174,311,264	38,348,477
Wheat flour.."	89,034	28,499
Gutta-percha, india-rubber and manufactures of..		16,541,844
Hats and caps..		1,072,424
Hides and skins—		
Untanned..kg.	8,271,479	22,749,858
Tanned.."	638,686	9,590,433
Horn, whalebone, celluloid, etc., and manufactures of..		1,447,792
Machinery and apparatus—		
Agricultural..		5,653,905
Engines, steam and gas..		11,443,086
Fly-wheels of all kinds..		568,173
Hydraulic motors..		2,311,629
Locomotives..		17,046,077
Machine tools..		5,663,430
Pumps..		2,248,951
Sewing machines..		4,410,179
Other machinery, etc..		45,701,150
Meat—		
Birds, living and dead and small game.kg.	2,268,853	3,630,164
Hams.."	150,160	240,256
Metals—		
Copper and alloys thereof..		21,444,918
Gold, silver and platinum..		1,785,622
Pesetas..		
Iron and steel—		
Unmanufactured..		20,773,855
Manufactured—		
Arms..		1,498,951
Articles of iron, wrought and stamped..		19,950,118
Cast-iron..		2,627,366
Hardware..		7,188,682
Small wares..		10,363,404
Wires and manufactures of..		3,256,549
Other metals and alloys thereof—		
Tin in ingots..kg.	1,708,762	5,553,477
Other metals and alloys..		3,712,677
Milk, condensed..kg.	3,327,485	5,390,525
Musical instruments..		1,381,139
Oils—		
Oleonaphtha, mineral, lubricating oils, vaseline, and mixtures of these products with animal or vegetable oils or fat..kg.	12,432,046	5,345,780
Petroleum and mineral oils.."	41,475,462	9,281,584
Optical, mathematical, scientific, surgical, etc., instruments..		2,721,465
Paper—		
Pulp for paper-making, cuttings of paper and paper waste..kg.	60,941,507	6,703,566
Cardboard and miscellaneous paper..		904,776
Paper in crude condition..		1,343,442
Paper, prepared..		1,709,572
Printed and engraved paper and photographs..		6,041,875
Wall paper..		485,171

SPANISH IMPORT TRADE ACCORDING TO ARTICLES.—*Concluded.*

Articles Imported.	1913.	
	Quantity.	Value.
Paraffin in lumps. kg.	5,399,736	5,291,741
Perfumery. "	199,781	1,728,105
Phosphates of lime (natural). "	279,405,673	8,940,981
Sausage, casings. "	1,887,927	4,094,849
Seeds, solum, linseed and other oleaginous seeds.	70,848,199	31,801,690
Silk—		
Raw. "	14,094	767,248
Twist or yarn. "		13,603,308
Manufactures.		10,866,823
Stearine in the mass. kg.	22,356	271,744
Spices. "	756,763	2,032,124
Spirits and wines.		1,821,818
Stones, earth, employed in building arts and industry—		
Lime of all kinds, cement and puzzalona. kg.	90,893,918	4,908,272
Marble, jasper and alabaster. "	7,624,697	952,516
Other stone and earths. "	71,255,029	3,747,196
Tallow and other animal fats. "	16,171,792	14,069,451
Tar, mineral, pitch and unrefined creosote and asphalts, bitumens and schists. kg.	34,452,875	2,975,027
Toys and games, common. "	128,622	1,395,548
Typewriters.		2,687,230
Vegetables. kg.	9,235,826	1,200,058
Vessels.		48,672,897
Wax. kg.	346,422	516,728
Wood—		
Unmanufactured—		
Planks, boards, beams, etc., of common wood. cu. metre.	603,309	43,684,198
Other wood, unmanufactured.		18,876,610
Manufactured—		
Furniture.		566,653
Other wood, manufactured.		2,029,071
Wool—		
Raw. kg.	4,874,587	10,769,920
Yarn.		205,076
Manufactures.		7,715,688
All other articles imported.		197,64,965
Total imports.		1,413,417,889

SPANISH EXPORT TRADE ACCORDING TO ARTICLES.

The following table illustrates the total quantities and value of the principal articles of merchandise exported from Spain during the year ended December 31, 1913:—

Pesetas=19·3 cents. Kilog.=2·204 pounds. Hectolitre=21·99 gallons. Cu. metre=35·3148 feet.

Articles Exported.	1913.	
	Quantity.	Value. Pesetas.
Animals—		
Cattle. No.	32,912	8,558,160
Horses. "	3,686	1,472,400
Mules and asses. "	21,031	5,768,925
Sheep. "	46,794	655,186
Swine. "	29,319	2,344,080
Arms.		10,707,682
Boots and shoes.		8,257,024
Bricks, common and paving stones. kg.	19,435,756	1,753,718
Cement. "	9,443,007	283,290
Cork.		49,261,515
Cotton—		
Yarn. kg.	689,581	3,449,405
Manufactures.		46,875,675
Esparto grass. kg.	36,497,464	4,014,721

SPANISH EXPORT TRADE ACCORDING TO ARTICLES—*Continued.*

Articles Exported—	Quantity.	1913.	Value.
		Pesetas.	
Fish—			
Fresh and salted.....		5,017,392	
Preserved.....		39,109,987	
Fruits and nuts—			
Almonds.....kg	15,251,856	26,850,988	
Grapes....."	87,224,610	24,125,201	
Melons....."	7,789,178	1,690,707	
Olives....."	9,281,022	6,066,747	
Oranges....."	569,066,444	68,287,973	
Peanuts....."	5,364,810	2,602,276	
Raisins....."	19,297,567	10,613,662	
Spanish nuts....."	6,352,677	4,764,508	
Fruits, preserved....."	2,494,355	2,494,255	
Glass and glassware.....		2,926,725	
Glycerine.....kg	1,517,488	1,826,986	
Grain and grain products—			
Barley.....kg	238,572	45,320	
Maize....."	2,407,348	433,323	
Pease (chick)....."	2,657,452	1,594,471	
Rice....."	19,987,505	8,591,627	
Wheat....."	464,756	125,484	
Wheat flour....."	2,078,772	748,351	
Hides and skins....."	8,451,578	20,534,187	
Liquorice and paste of....."	2,495,222	1,274,418	
Metals—			
Copper.....kg	39,102,651	45,193,107	
Iron and steel....."	10,795,268	1,769,673	
Lead in plates, bars, etc....."	172,283,161	65,187,536	
Quicksilver....."	1,489,731	8,193,521	
Mineral ores—			
Copper.....1,000 kg.	160,385	3,239,589	
Iron....."	8,907,309	97,984,414	
Iron pyrites....."	2,903,554	37,746,198	
Manganese.....kg	27,793,487	1,528,642	
Zinc....."	114,418,703	5,884,157	
Mineral waters....."	3,107,852	2,175,197	
Oils, olive....."	30,199,502	30,199,502	
Paper, all kinds....."		15,342,494	
Resin.....kg	8,313,677	2,678,418	
Salt, common....."	564,041,200	5,640,412	
Sandals of hemp....."		6,223,445	
Silk—			
In cocoons.....kg	83,469	1,168,566	
Manufactures....."		1,075,765	
Silver bullion....."		14,526,304	
Soap, common.....kg	1,906,299	991,276	
Spices—			
Pimento.....kg	5,968,153	4,774,522	
Saffron....."	97,239	9,723,900	
Tartar, crude....."	12,582,452	5,913,752	
Tiles....."	9,311,785	2,234,828	
Turpentine....."	4,341,362	5,991,080	
Umbrellas and parasols....."		633,835	
Vegetables, fresh—			
Garlic.....kg	4,836,994	2,176,647	
Onions....."	163,395,478	16,339,548	
Potatoes....."	68,102,287	10,215,343	
Vegetables, pulse, preserved....."	10,472,824	10,472,824	
Wines.....litre.	453,655,980	142,323,318	
Wood....."		13,716,625	
Wool—			
Raw.....kg	14,486,387	26,303,932	
Manufactures....."		4,387,333	
All other articles exported.....		219,214,340	
Total exports.....		1,195,007,719	

UNITED STATES IMPORTS INTO SPAIN.

The following figures show the extent of the United States imports into Spain during the first four months of 1919 as compared with the total imports from all foreign countries:—

	Imports from United States.	Total Imports all Countries.
Slate in slabs, engraved and cut, etc. Kg.	7,597	12,332
Articles in slate, polished and finished.	14,813	20,613
Emery paper.	24,861	27,603
" cloth.	6,307	8,368
Asbestos, raw.	291,697	331,817
Asbestos in sheets.	1,765	29,005
Petrol residue with 30 to 70 per cent of tar.	734,903	734,903
Petroleum and mineral oils which when distilled 300° centigrade, leave more than 80 per cent residue.	1,024	1,024
Petroleum 20 to 80 per cent inclusive.	10,524,529	10,641,764
Other mineral oils in same conditions as previous.	54,371	54,372
Mineral lubricating oils and vaselines.	5,264,362	5,413,559
Benzine and similar products.	2,720	9,807
Gasolene.	59,641	192,793
Crystal glass uncut and unstained, in articles not specified.	1,593	9,949
Fluted, unpolished glass and reinforced glass up to 4 mm. thick.	726	924
Stoves, odourless paraffin stoves, filters, baths, piping and other similar articles.	302,310	404,293
Gold and jewellery.	7	84
Unpolished section iron and steel in bars.	269,293	2,372,453
Iron and steel sheets over 5 mm. thick.	205,220	3,859,242
" " " 1 to 5 mm. thick.	60,984	136,224
" " " under 1 mm. thick.	585,069	595,671
Polished iron and steel in bars and sheets.	30,389	193,527
Unpolished hoop iron and steel 1 to 3 mm. thick.	205,897	277,125
Unpolished hoop iron and steel and springs under 1 mm. thick.	82,175	94,375
Pieces for the adjustment of iron and steel tubes.	18,048	44,150
Iron and steel castings from 20 to 100 kg.	1,544	4,464
" " " 1 kg. and under.	458	1,469
Unturned carriage axles (straight).	12,177	1,443
Turned carriage axles (straight).	13,757	66,963
Curved or bent carriage axles.	238	11,233
Iron and steel wheels over 100 kg. in weight.	41,559	485,181
Other wheels and iron and steel pulleys.	2,401	24,023
Springs and butts (not of wire) for carriages.	31,673	204,832
Iron and steel chains and cables, with links over 10 mm. thick.	171,544	197,473
Iron and steel chains and cables, with links from 2 to 10 mm. thick.	494	2,381
Sleepers and other pieces for railways and tramways.	13,400	24,147
Turning-platforms, signalling apparatus, etc.	152	7,166
Forged iron or steel tubes to 45 mm. diameter.	232,549	474,968
" " " from 45 mm. diameter up- wards.	613,440	911,421
Accessories for adjustment of above tubes.	6,874	31,765
Steel and iron frames for tenders, coaches and car- riages.	88,391	141,456
Large iron and steel parts for bridges and buildings, etc. Forged parts over 100 kg. in weight.	72,143	140,386
" up to and including 100 kg.	19,190	80,520
Unpolished iron or steel wire from 5 mm. thick.	59,502	459,820
Or polished 1 to 5 mm. thick.	97,441	123,486
Up to 1 mm. thick.	15,301	18,482
Iron or steel wire cables.	41,575	45,628
Barbed wire and springs of iron and steel.	7,242	311,916
Iron wire fencing and netting over 1 mm. thick.	68	2,579
Iron and steel wire netting with not over 40 threads per square centimetre.	1,105	4,132
Rivets and hooks.	126	2,729
Screws and bolts over 10 mm. thick and nuts.	26,100	56,373
5 to 10 mm. thick with nuts and washers.	61,684	102,449
Up to 5 mm. thick with nuts and washers.	34,551	49,008
	22,035	28,932

UNITED STATES IMPORTS INTO SPAIN.—Continued.

	Imports from United States.	Total Imports all Countries
Nails, tacks, and French nails over 1 mm., plain..Kg.	63,416	66,824
With polished head, etc.	369	4,861
Locks, bolts, keys, etc.	5,288	6,927
With parts of different metals.	4,343	7,191
Unpolished iron fittings for doors, carriages and furni- ture, etc.	17,945	26,702
Polished and mixed with other materials.	567	5,209
Kitchen stoves, stoves, radiators and similar apparatus.	184	19,844
Steel or iron safes for office and other uses.	1,748	17,814
Beds and other iron or steel furniture except kitchen utensils.	22,042	70,448
With parts of other metals and ornaments.	8,697	9,305
Sawing, rasping or filing tools with or without handle.	66,711	133,961
For perforating, planing or cutting.	18,418	50,568
Other tools weighing over 1 kg.	36,399	88,247
Weighing under 1 kg.	10,598	16,894
Iron and steel webbing up to 1 mm. thick.	14,656	19,281
Unpolished and unplated kitchen utensils, in iron or steel.	302	363
Made with iron sheeting, unpolished.	272	345
Polished, enamelled and galvanized.	10,208	27,782
Tin sheeting, lithographed or painted.	283	987
Umbrella and parasol frames, plain and without handles.	65,754	76,410
Table knives, carving knives, razors, pen knives. . .	1,130	3,357
Scissors for toilet and needlework.	771	857
Brooches, hooks and eyes, and chains 2 mm. and under, thick.	11,338	13,970
For personal use, plated with other metals except gold and silver.	—	—
All other hardware, plain.	9,186	26,584
Short firearms and accessories.	194	230
Other firearms permitted and accessories.	921	981
Copper of first casting, copper bronze and brass in bars and ingots.	108,874	293,010
Copper in bars of over 1 centimetre thick.	28,883	77,650
Copper, brass and bronze wire 1 to 19 mm. thick. .	1,205,696	1,219,235
Less than 1 mm. thick.	23,287	25,251
Copper, bronze and brass in sheets.	173,356	342,001
" " " tubes.	138,322	345,948
" " " rivets, nails, screws.	190	2,787
Clasps, hooks and eyes, etc., for clothing.	6,783	6,978
Personal use, with parts of other materials except gold and silver.	542	2,492
Other objects of copper and its alloys, plain.	2,551	53,933
with decoration of other metal than iron or steel.	7,599	13,078
Domestic utensils in aluminium and alloys.	3,296	3,743
Other articles in aluminium.	309	392
Tin in sheets, bottle capsules, etc.	486	10,393
Small articles in lead and printing type.	109	3,734
Zinc sheets, nails and wire.	10,309	11,086
Manufactured articles in zinc.	2,906	3,806
Vegetable oils, except olive, coconut and palm oil..	17,839	220,272
Vegetable resin and pitch.	3,918	27,248
Vegetable products for medicines.	4,035	60,327
not classified.	43,057	322,735
Animal products used in medicines.	2,288	17,430
Ochres and earths for paints not ground.	11,378	11,437
Vegetable colour extracts.	62,714	981,570
Varnishes without alcohol.	36,435	132,472
Mineral colours (powders and earths)	19,356	152,459
prepare with oils.	144,890	248,274
Writing inks.	74	42,958
Printing inks and pastes.	52,413	96,351
Colours derived from coal.	57,441	86,108
Thio-carbon.	19,988	29,060
Other chemical products.	5,510	5,739
Acetate of lime, and pyrolignite of iron.	20,592	20,592
Oil and chlorhydrate of aniline.	5,216	70,650
Carbolic acid, naphthaline and creoline.	14,579	52,255
Alums, sulphate of aluminium, etc.	16,830	176,805
Alkaline carbonates, borates and silicates, etc. . .	36,516	464,552
Chloroform.	738	1,411
Chloride of lime and chloride of calcium.	95,432	498,016
Glues.	2,744	13,839
Insecticide compounds and sulphate of copper. . . .	236	20,912

UNITED STATES IMPORTS INTO SPAIN.—*Continued.*

	Imports from United States.	Total Imports all Countries.
Oxides of lead Kg.	2,109	9,234
Quinine and its salts	161	1,131
Other alkaloids and their salts	140	1,962
Sodas and caustic potashes	1,674	2,416
Sulphate of soda, etc.	70,924	146,491
Other chemical products not mentioned	410,123	733,350
Tannin	607	5,585
Pills, capsules and medicines	1,917	6,968
Medicaments containing sugar or glucose	3,473	9,105
" " " containing alcohol	390	3,160
Other pharmaceutical products	19,724	146,106
Wheat, rice or maize starch	3,056	3,522
Feculas for industrial use	11,156	362,776
Mineral and vegetable waxes in lumps	2,589	35,104
" " " worked	44	162
Stearine and palmitine in lumps	5,100	29,108
Paraffin wax in lumps	3,191,426	3,231,826
Common soap	16	23,780
Alcoholic perfumery	4,373	26,926
Other perfumery and essences	28,443	100,357
Raw cotton	35,732,159	36,231,515
Cotton, Nos. 51 to 75, inclusive	72,915	75,047
Manilla hemp cord, one ply up to 30 grammes per 10 metres	548,155	594,111
Hemp thread, ropes and string, etc., over 50 grammes per 19 metres	3,536	187,802
Jute, hemp, fibre and similar textiles, for tapestry	2,101	2,507
Vegetable fibre carpets	505	1,246
Textiles of knitted floss and chemical silk	2,038	3,379
Textiles of silk or floss silk mixed with vegetable fibre	3	3,563
Printing paper in rolls from 41 to 50 grammes without mechanical paste, and other from 51 upwards	10,701	535,880
Ordinary packing paper	43,085	44,815
Raw paper, not listed	489	674
White or coloured paper cut, and hand made	2,372	9,810
Paper coated with mineral materials, glass or mica, etc.	20,052	35,795
Envelopes for correspondence	3,175	8,786
Books and printed matter in Spanish	6,839	27,597
" " " other languages	2,546	29,094
Engravings, maps and designs	1,893	21,435
Lined paper	94	4,469
Pasteboard and cardboard, over 500 grammes	14,264	24,518
Plain cardboard boxes	389	1,176
Staves	8,030,694	10,358,205
Ordinary wood in planks up to 40 mm. thick	324	12,003
" " " under 40 mm. thick	48,327	56,278
Fine wood in planks, unworked, over 40 mm. thick	14,081	662,253
" " " 5 to 40 mm. thick	14,555	19,409
Wooden casks for liquids	1,667,452	1,835,777
Other casks for other uses	332	138,475
Ordinary wooden articles	20,672	33,564
" " " turned articles, except furniture or laths	1,775	87,016
" " " in fine wood except furniture and laths	17	1,926
" " " furniture, neither carved nor veneered	530	1,952
Rushes, reeds, horsehair and other material, unworked	5,206	662,789
Prepared hides of all kinds	27,231	28,346
Hides cut into strips	68	1,208
Leather belting	5,421	13,841
" " " boots and shoes	1,432	2,825
" " " harness and accessories for horses and carriages	7	142
Tallow and other animal fats unmanufactured	15,153	3,481,748
Guts	311,365	521,537
Animal coal	2,156	23,892
Other articles not included	10,393	1,123,061
Harmoniums and small pianos (with handle)	210	1,499
Grand pianos (number) 16-20	—	—
Other pianos (number) 315-330	—	—
Mechanical apparatus for musical reproductions	1,618	2,434
Keyboards and mechanism for all kinds of pianos	70	4,705
Musical instruments of metal or other than of wood	56	315
Instruments of any material for direct measurement of longitudes	2,676	6,363
Articles for surgery and laboratory	813	4,459

UNITED STATES IMPORTS INTO SPAIN.—*Continued.*

	Imports from United States.	Total Imports all Countries.
Other scientific instruments. Kg.	19,248	31,765
Gold watches.	50	5,860
Ordinary clocks and alarms.	6,237	8,037
Typewriters.	42,689	44,465
Phonographs, gramophones and similar apparatus.	5,387	8,081
Dynamos, electro-motors, etc., up to 100 kg. weight.	96,671	197,844
101 to 400 kg. in weight.	61,910	217,386
Switchboards and switches, up to 400 kg.	31,233	48,757
Dynamos, electro-motors, switchboards, etc., 401 to 2,500 kg. in weight.	188,997	436,885
from 5,001 kg. upwards.	139,957	192,869
from 5,000 kg. upw. rds.	139,957	192,869
Accumulators and electric batteries.	9,498	20,112
Electric wires 1 centimetre thick and upwards.	30,319	28,342
Other electric wires under 1 centimetre.	3,288	9,806
Telegraphic and telephonic apparatus.	17,383	48,171
Voltallic arc lamps.	73	210
Carbons for voltallic arc lamps.	750	859
Electrodes for metallurgy.	1,314	81,555
Electric incandescent lamps with mounts.	2,566	17,334
Counter scales and weighing apparatus.	2,873	2,964
Weighing machines and other weighing apparatus.	16,199	25,040
Agricultural machinery.	1,123,237	1,287,826
Steam cylindrical generators.	5,019	7,656
multitubular.	1,319	445,984
Semi-fixed steam and gas engines, with boilers.	86,553	145,397
Fly wheels for all kinds of machines.	35,956	81,442
Single cylinders for rolling machinery for iron and steel.	2,420	97,156
Fixed and movable cranes.	119,051	186,111
Pumps of all descriptions.	38,963	84,572
Locomotives and tenders over 35 tons.	254,462	254,462
up to 35 tons.	174,168	463,890
Hydraulic motors.	568	469,660
Copper machines, and parts.	2,757	20,104
Sewing and embroidery machines.	119,228	837,649
Machines, for knitting stockings, up to 70 kg.	782	813
Other embroidery and knitting machines.	—
Hosiery and crochet machines over 70 kg.	6,468	6,587
Machines other than of copper, for textiles.	70,970	236,339
Machine-tools up to 500 kg. inclusive.	69,628	112,073
501 kg. and upwards.	427,425	577,435
Other machines not mentioned.	863,994	1,908,662
Machinery for manufacturing rough paper for smoothing purposes.	3,499	193,630
Bands of any material for carding.	142	25,639
Velocipedes, bicycles and motorcycles.	18,806	35,718
Handcarts.	27	210
Frames for ordinary carriages up to 1,000 kg.	24,099	29,827
over 1,000 kg.	8,019	27,317
Carriages and motor cars, open, with or without engine, up to 1,000 kg.	57,758	60,410
over 1,000 kg.	46,223	60,521
closed, over 1,000 kg.	11,087	14,783
Camions and other autocars.	34,003	49,830
Wagons and carts for animal traction, and small carts.	1,497	2,263
Heavy vans, wagonettes, of all descriptions.	27,194	27,194
Hams.	5,101	5,189
Natural butter, margarine and cocoa butter.	6,810	13,331
Codfish and stockfish.	62,336	12,570,315
Sugar.	2,387,179	4,091,601
Canned foodstuffs.	41,917	49,992
Horn, whalebone, celluloid, meerschaum, ebonite and bone, worked, not mixed with gold or silver, and made up into personal trinkets.	2,473	5,758
made into other articles, and the whalebone and horn cut into sheets.	8,338	19,732
Buttons and cuff links of horn, bone, ivory, mother-of-pearl, paste and porcelain.	1,217	16,948
in metals other than gold or silver.	678	4,801
Other buttons and cuff links.	10	273
Brushes of all classes for painting.	520	2,925
Brushes, with or without wooden top.	35	615
with inlaid tops or handles, without gold or silver.	400	3,504

TRADING IN SPAIN

UNITED STATES IMPORTS INTO SPAIN.—(Continued.)

	Imports from United States.	Total Imports all Countries
Cartridges without bullets for firearmsKg	30,000	109,921
with bullet	75	140,462
Small wooden cases of fine wood, leather, lined with silk and others	182	1,060
Rubber hose or tubes, whether reinforced or not with wire	826	14,561
Solid rubber tires, metal reinforced	39,991	95,865
Pneumatic tires for carriage wheels	20,58	95,451
Elastic for shoes, braces, garters, etc.	1,876	11,649
Waterproof rubber sheeting (cloth)	76	13,094
Rubber for shoes, even containing other material in other forms, except instruments, toys and sta- tionery articles	2,321	17,023
Floor and packing oilcloth	376	1,802
Toys except those in ivory, tortoise-shell, mother-of- pearl, gold or silver	17,826	67,626
Lamps, table lamps, chandeliers for illumination	2,795	10,029
Stationery articles except those of gold or silver	772	11,629
Straw hats and bonnets	2,109	23,022
Packing sacks	105	574
Raw tobacco	63,264	644,360
	4,616,103	12,673,800

Canadian Exports to Spain.

The following statistics from Canadian Government returns, show Canada's exports to Spain during the year 1913, together with their value:—

Articles Exported—	Quantity.	Value 1913. \$ 130
Breadstuffs		
Fish—		
Cod, dry-saltedCwt.	2,545	\$ 16,200
Total fish		\$16,200
Metals and minerals and manufactures of—		
Iron and steel and manufactures of—		
Agricultural implements—		
CultivatorsNo	192	\$ 5,145
Harrows	26	197
Harvesters	50	5,080
Hay rakes	21	378
Mowing machines	41	1,261
Reapers	250	14,011
Other agricultural implements		1,963
Parts of agricultural implements		1,805
Total agricultural implements		\$29,840
Other iron and steel and manufactures of		227
Total iron and steel and manufactures of		30,067
Other metals and minerals and manufactures of		708
Total metals and minerals and manufactures of		\$30,775
Provisions		\$671
Wool and manufactures of—		
Planks and boardsM. ft	17	840
Total wood and manufactures of		\$840
All other articles exported		\$12
Total exports for 1913		\$48,623

Canadian Imports from Spain.

The following statistics from Canadian Government returns show Canada's imports from Spain during the year 1917, together with their values.

Articles Imported—		1917.	
		Quantity	Value \$
Books, pamphlets, etc.			
Cotton and manila manufactures	Lbs.		1,408
Dresses, dresses, dresses, and robes			110
Fancy goods			272
Fish			200
Flax, hemp, jute and manila fibres of			2,000
Fruits and nuts			
Dates			
Figs	Lbs.	100,000	1,110
Raisins		1,000,000	3,000
Nuts, almonds, etc.		100,000	20,000
Almonds, not shelled		100,000	20,000
Pecans, not shelled and shelled pecans, not		100,000	20,000
Walnuts, not shelled		100,000	20,000
Other nuts, not shelled		100,000	20,000
" shelled		100,000	20,000
Total fruits and nuts			100,000
Green			
Grapes	Lbs.	1,000,000	10,000
Lemons and limes			10,000
Oranges and shaddock or grape fruit			10,000
Fruits, canned or preserved			10,000
Metals and manufactures of			10,000
Cans			10,000
Packages and parcels			10,000
Pickles, sauces and soy	Gals.	1,000,000	10,000
Pocket-books, portfolios, purses, reticules, watch-bags, card-cases, fly-books and musical instrument cases			10,000
Rags	Cwt.	10,000	10,000
Salt		10,000	10,000
Soap	Lbs.	10,000	10,000
Spirits			10,000
Spirits and wines			
Spirits			10,000
Wines, non-sparkling			10,000
" sparkling			10,000
Total spirits and wines			10,000
Vegetables			10,000
Wood and manufactures of			
Corks and other manufactures of cork, wood or cork			10,000
Other wood and manufactures of			10,000
Total wood and manufactures of			10,000
All other articles reported			10,000
Total imports for 1917			\$1,222,882

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